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ABSTRACT

This publication provides a theoretical framework for a Finnish research project, "Effectiveness of Teacher Education." The collection of papers includes two parts. Part 1, "Approaches to Evaluation," offers: "Effectiveness of Teacher Education--A Theoretical Framework of Communicative Evaluation and the Design of a Finnish Research Project" (Hannele Niemi); "The Starting Points and Main Principles of Evaluation in a Project Focusing on the Effectiveness of Teacher Education" (Leena Syrjala); and "The Concept of Effectiveness in the Evaluation of Educational Outcomes" (Ritva Jakku-Sihvonen). Part 2, "New Challenges to Evaluation in Teacher Education," includes: "Learning Contents and Processes in Context: Towards Coherence in Educational Outcomes Through Teacher Development" (Viljo Kohonen), "Teachers' Professional Morality: How Teacher Education Prepares Teachers to Identify and Solve Moral Dilemmas at School" (Kirsi Tirri); "Teachers' Readiness for Modern Information Technology" (Martti Piipari); "International Teacher Education as an Attempt to Provide Competencies for a Multicultural World" (Rauni Rasanen); "Intercultural Education as an Integral Part of The School Curriculum and Teacher Education" (Pauli Kaikkonen); "Teacher Education and Gender" (Vappu Sunnari); "Analyzing and Evaluating Student Teachers' Developmental Process from the Point of Self-Study" (Sinikka Ojanen); and "Student Teachers' Personal Development During Teacher Education in the Light of Self-Assessment" (Tuula Laine). (SM)

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Reports from the Department of Teacher Education in Tampere University

Hannele Niemi and Kirsi Tirri (eds.)

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Effectiveness of Teacher Education

New Challenges and Approaches to Evaluation

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Effectiveness of Teacher Education
New Challenges and Approaches to Evaluation

Effectiveness of Teacher Education
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Editors

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Introduction

Hannele Niemi and Kirsi Tirri

This publication provides a theoretical framework for the research project "Effectiveness of Teacher Education." The project started in autumn 1995 and is financed by the Academy of Finland. The objective of the research project is to evaluate the effectiveness of Finnish teacher education at individual, organization, national education policy and international teacher education policy levels. Effectiveness is here taken to mean the ability of teacher education to meet the educational needs of various learners and society, the development of its culture and working life. The project focuses particularly on recent and future educational challenges. In this book these recent educational challenges are discussed with an attempt to devise new approaches to evaluate the effectiveness of teacher education in these areas.

The first part of this publication discusses different approaches to evaluation. In this part the head of the research project, Professor Hannele Niemi, gives a theoretical conceptualization of the research project. The other topics of the first part include investigation of the main concepts of the research project: evaluation and effectiveness.

In the second part of this publication, new challenges to evaluation in teacher education are explored. These challenges are discussed on a cultural and societal level and on an individual level. The articles highlight new areas that need to be emphasized in teacher education, including professional morality, information technology, intercultural and international education and gender equity. On the personal level, the importance of student teachers' developmental process is discussed. The modern targets in teacher education require new approaches in evaluating their outcomes. In these articles the authors have made an effort to invent and explore alternative approaches of evaluation that would suit their research area.

The project aims at creating a national and international network of persons investigating the effectiveness of teacher education. The editors of this volume hope that this publication will encourage discussion and research in teacher education between all the interested parties.

Part One

Approaches to evaluation

Effectiveness of teacher education — a theoretical framework of communicative evaluation and the design of a Finnish research project

Hannele Niemi, Tampere

Abstract

The purpose of the article is to give a theoretical conceptualization of what effectiveness is in teacher education. The writer emphasizes that teachers are representatives of an ethical profession and they have an important role in the course of implementing democracy, social justice and human rights. The evaluation of teacher education should be in line with these purposes. In the article, Habermas' theory of communicative action has been used as a reference for understanding recent problems of teacher education. In the Habermasian framework of critical thought, communication and partnership become important criteria for effectiveness. This kind of evaluation is called a "communicative evaluation". It has three functions: revealing, anticipating and aiming for communication and partnership. In the Finnish research project on effectiveness, these principles have been applied. In addition, effectiveness of teacher education will be analyzed on three levels: culture, society and personal. The goal of the project is to get knowledge for developing teacher education and to facilitate its becoming a real partner in the modern and postmodern learning society.

Key words: effectiveness of teacher education, quality of teacher education, evaluation, communicative action

1. High-quality teachers in a learning society

In many scenarios, education is mentioned as one of the most important investments (Cochinaux & de Woot 1995; White Paper 1995). This concerns reports of international economic corporations and national plans in various countries (OECD 1992; 1993; 1995; Neave 1992; Ministry of Education 1994; Wagner 1993, for example). The long-term objectives in technology, economics and culture may be achieved only by a carefully

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planned educational system. This is recognized both in wealthy countries and in developing countries (Farrell and Oliveira 1993; White Paper 1995).

Representatives of Europe's industrial leaders (ERT) and of Rectors of European Universities (CRE) have come together to draw up a report on the future of education (Cochinaux and de Woot 1995). In the report they express with a note of urgency the demands of the learning society on educational systems. The report draws scenarios of how Europe should react to recent and arising economic problems, unemployment and the global interdependence of people. The answer is under no circumstances underpaid labor but high-quality education. They draw a scenario in terms of a learning society (Cochinaux and de Woot 1995, 52).

A learning society offers a broad vision. It would be one in which everyone participated in life-long education and training. It would be a society characterized by high standards and low failure rates. The main message is: Learning empowers. In recognizing the meaning of educational quality, the importance of high-quality teachers has also been highlighted. In European scenarios, the quality of teaching and role of teachers are becoming more crucial than ever. A revolution has to happen at the teachers' level as well (Cochinaux and de Woot 1995, 87; White paper 1995).

In the report "Moving Towards a Learning Society", the writers ask, "How can one hope to have a high quality of basic education, if quality is not a prime objective of teacher training?" (Cochinaux and de Woot 1995, 101). Teacher education is seen as a very important means for achieving the objectives of a learning society. Demands and expectations as well as criticism towards teacher education have increasingly intensified in the last decade in almost all western countries. The European Journal of Teacher Education (1995) gives a rich overview of how different countries are expecting increasingly sociopolitical outcomes from teacher education. Teacher education is a strong political issue, and many researchers speak about political dimensions of teacher education (Ginsburg and Lindsay 1995).

The importance of high-quality teachers has been called for in many official and unofficial contexts. There are, however, very different voices regarding what kind of teacher's role is seen as being valuable in a society. There are several discourses about teachers and the teaching profession: the teacher as a researcher, a decision maker, a practitioner, an agent for change, a reflecting practitioner, a professional, a critical professional, and phrases like teacher empowerment, importance of teachers' practical knowledge, teachers and education as investments for the future. All these terms and phrases imply many assumptions and visions, as well as contradictions in teachers' work in schools and arrangements of teacher education. They have very different meaning depending on the frame of reference. Several teacher education researchers have raised a serious question about the direction of the teaching profession and teacher education (for instance, Fullan and Hargreaves, A. 1996; Grimmett 1995; 1996; Wideen and Grimmett 1995; Smyth 1995; Hargreaves, A. 1994). There is an obvious need to develop teacher education, and we need more knowledge about the effectiveness of teacher education. It is, however, important to clarify what kind of evaluation of effectiveness is needed.

This article focuses on the following questions:

Q1: What consequences does the concept of teacher development and the teaching profession have for the evaluation of effectiveness in teacher education?

Q2: What does the critical theory mean as a theoretical framework for evaluation of effectiveness?

Q3: What are the functions of communicative evaluation?

Q4: How can the principles of communicative evaluation be applied in a Finnish research project?

2. The concept of teacher development and the teaching profession as a reference for the evaluation of effectiveness in teacher education.

Discourses on the teaching profession and teacher development have had confusingly many faces. Linda Darling-Hammond (1990, 31) is very critical, for example, of the use of the term "professionalism". She argues: "Indeed, the very definition of 'professionalism' in the teaching has been turned on its head in public schools. Rather than connoting a high level of training and knowledge applied to practice that must, above all else, serve the needs of clients in intellectually honest ways, the term is used by most policy-makers and administrators to mean an unquestioning compliance with agency directives. Evaluation criteria stress good soldiership and conformity with district policies rather than knowledgeable advocacy of appropriate teaching practices. The 'professional' teacher in common parlance is one who 'does things right' rather than one who 'does the right things'."

We may draw a rough picture of recent trends in teacher development by two contrary directions in the debate on teacher education. The one trend is towards more overt accountability and quality control of teachers and teacher education. The other direction emphasizes deeper and broader ethical responsibility, which should be based on teachers' professional role and status.

Noreen B. Garman (1995, 24–31) has analyzed recent discourses in education. She identifies two major trends during the last decade in the U.S. These discourses are instructional leadership and teacher empowerment. The first one has been manifested by concepts and phrases like school-based accountability, principals' control over teachers, teacher evaluation and measures of teacher performance for achieving better quality in teaching. The other discourse is introduced by critical theorists who argue "that teachers can transform themselves intellectually, overcome technical rationality, grow in awareness of both the overt and the hidden curriculum and encourage reflective practise, self efficacy and self-confirmation through collective action and social transformation. Common among these scholars is the belief that teachers must acquire the knowledge, skills and power to transform the existing social order both individually and collectively" (Gar-

man 1995, 31). Even though these two trends have been presented to describe American educational communities, they have parallel forms everywhere in the world.

John Smyth (1995, 1) has described the manifestations of teachers' low and unprofessional status. Common to them is a pressure to see the teacher as an unautonomous instrument of political ends. Typical features are the following indicators:

- intensifying the testing and the measurement of educational "outcomes" through national and statewide testing;
- focusing on demonstrable, observable and performance aspects of teachers' work;
- requiring teachers to be increasingly explicit about what they do;
- defining competence in teaching according to static invariant standards derived largely from business and industry;
- requiring that teaching be reduced to some magical "bottom line";
- rewarding teaching on the basis of "merit pay" and "payment by results", according to the extent to which teachers are able to demonstrate achievement-oriented learning gains in students;
- demanding, under the guise of accountability, that teachers show that what they do enhances the skills of students and, in turn, ratchets up the level of international economic competitiveness;
- raking up, rating and appraising teachers and placing schools in "league tables" that compare one against the other;
- marginalizing teachers because they are regarded as self-interested "producers", and, instead favoring "consumers", vaguely defined as parents and employers;
- treating teachers implicitly as if they cannot be trusted and are in need of surveillance through the use of "performance indicators".

The other conception of the teaching profession wants to enhance the teachers' profession and its status in a society. In the critical theory, teachers are seen as part of society and they are encouraged to assume an emancipatory role in their profession (Carr and Kemmis 1986; Shor 1992; Liston and Zeichner 1987; 1991; Tabachnick and Zeichner 1991; Niemi 1993; 1996). Teaching is seen as a genuine profession which has a recognized status in a society. To grow as professionals, teachers need to develop a critical and participatory culture in the profession. Research on teacher empowerment has encouraged teachers to raise their voice and participate in educational debates.

W. Carr and A. Hartnett have raised a serious question about teachers' tasks in a society. They see teachers' meaning as being definitely important in achieving and sustaining democracy in a society. Therefore, according to Carr and Hartnett (1996) and Hartnett and Carr (1995) teacher development should be based on the following premises:

1) Teacher development must be connected with more general social and political theories about such issues as democracy, social justice, equality and legitimacy. It has to demonstrate the implications of a principled view of democracy not just for educational systems but also for the way in which educational institutions should be run. It also has to relate these ideas to curricula, pedagogy and assessment.

2) Teacher development must be located within a particular historical, political and educational tradition and context. Teachers do not work and reflect in a social vacuum. They act within institutions, structures and processes which have a past and a social momentum.

3) A theory of teacher education has to re-establish a democratic political agenda and to develop constituencies in the wider society for this work so as to bring about the changes as required.

The same tensions which concern the teaching profession and teacher development exist in paradigms of teachers' pre- and in-service education. There are different fronts among the visions of how to develop teacher education. There are many researchers who emphasize the importance of educating teachers as agents of educational reforms and changes. Teachers are not seen only as implementors of a curriculum which the administration has authorized or as objects of educational research. Teachers should have a more active role as developers of teaching, and they are also seen as being more responsible for the development of their own profession in a larger sense (Hargreaves, A. 1994; Hargreaves, D. 1994; Fullan 1993; Lieberman 1990; 1996; Oser 1994; Niemi and Kohonen 1995). These aims should be reflected in teacher education programs.

If the teacher is seen as a partner in enhancing educational opportunities, the following aspects of teacher education should be emphasized (Niemi 1996):

- teaching as a moral profession with a high-level moral responsibility needs a good initial education for exploring value questions
- teaching requires professional autonomy; teachers need to be active partners in school development, and teacher education should introduce them to this role
- teacher education has to provide active learning concepts with a deep knowledge of learning and an ability to guide the learning processes of different learners
- teacher education's mission is to educate teachers to become active partners for enhancing education and seeking learning opportunities in society for all learners
- teachers have to learn collegial collaboration with other teachers

There are, however, numerous examples of opposite tendencies in many countries which try to obtain more centralized, competence-based teacher training, which serves in achieving mainly technical skills. These trends force teachers to work as technicians or bureaucrats. This status entails the following features (Niemi 1996):

- teacher education is controlled by tight norms, orders and control from administrators and/or politicians
- teachers are trained to implement curricula ("teacher-proof" curricula)
- the quality of teaching and teacher competence is defined by narrow, easily measurable objectives
- typical of the intellectual climate in teacher education is avoidance of pedagogical discussion
- a political ideal is practically oriented, minimal teacher education

This option entails teachers needing a great deal of supervision and control. Because of control and the dependent status, teachers lose the motivation to develop their work. The consequence is lower results in student learning. This is accompanied by uncertainty about teachers' professional capacity and their demands for a more independent status. All of these factors accumulate and create weaker working conditions for teachers, more isolation and fewer opportunities for constructive co-operation with administration on an equal basis.

Smyth (1995), Carr and Hartnett (1996), Hartnett and Carr (1995) and Wideen (1995) are worried about technical rationality having become the prevailing tendency in teacher education and in teacher development. A danger of technical rationality is not only coming as a threat from outside demands — for instance, from administration — but also growing inside teacher education's own tradition. By focusing only on the training of technical skills and classroom management, teachers and teacher education have lost their power to be involved in a deeper social and educational debate and in reforms of education. Hartnett and Carr (1995, 41) want "to shift the debate away from the often technical minutiae of local issues about teacher education, and back to the historical, intellectual and moral issues about the nature of the good society and of the good life, and to the role of teachers, schools and education in helping to imagine, construct and maintain them. It proposes that in a developed democratic society teachers should be a critically reflective group which is given difficult and complex tasks to do. Teachers' status, prestige, development and education has to reflect the complexity and social importance of these tasks."

The paradigm of teacher development and concept of the teaching profession reflects on the evaluation of effectiveness in teacher education. Evaluation of teacher education has a much larger perspective in the reference frame where teachers are seen as representatives of a high-quality ethical profession rather than of a technical craft. In the former case, it requires that teachers are provided a language of criticism and political skills through which there can be a rational, moral and purposive commitment in the revision of education (Sultana 1995, 141).

Teacher education is at a crossroads. It is obvious that many things have to be changed. There is however, a difference regarding into which direction the efforts are steered. For getting a deeper understanding of recent problems Habermas' critical theory has been used as a reference for creating guidelines for the evaluation of effectiveness of teacher education.

3. How to evaluate the effectiveness of teacher education as value- and context-bound phenomena; grounds for the application of a critical theory

Objectives of teacher education, hidden or clearly expressed, in each country are multi-layered and bound to the social, political and historical contexts. Teacher education is a part of the educational system in a differentiated society. Modern societies have undergone a long differentiation process which has also had great influence on educational systems. The differentiation process may be explained by different sociological theories like Parsons' theory of rationalization and Durkheim's theory of division of labor. In this article the differentiation phenomena are analyzed in the framework Habermas' social theory and his concept of communicative action. Evaluation of teacher education has been set in the light of his theoretical postulates.

In Habermas' theory three kinds of differentiation processes can be identified:

(1) differentiation of the social system into more complex subsystems,

(2) differentiation of lifeworld and

(3) uncoupling of system and lifeworld.

According to Habermas, modern society has undergone a differentiation process which has produced institutional complexity. There is no longer a single, collective steering force. "In traditional societies the state is an organization in which is concentrated the collectivity's capacity for action — that is, the capacity for action of society as a whole; by contrast, modern societies do without the accumulation of steering functions within a single organization. Functions relevant to society as a whole are distributed among different subsystems. With an administration, military, and judiciary, the state specializes in attaining collective goals via binding decisions. Other functions are depoliticized and given over to nongovernmental subsystems" (Habermas 1987, 171). Habermas continues the description of the process: "Within a subsystem that has been differentiated out for a single function relevant to society as a whole, the scope for organizational accomplishments expands once again." (Habermas 1987, 171–172.)

Education and teacher education are subsystems in a modern society. Educational systems and teacher education have undergone the multi-phase differentiation process. Premodern society did not have educational systems such as are nowadays needed. The functions of education were connected with a sacred world view or ritualistic forms of life. The more complex societies have become, the more differentiated are their educational systems and subsystems. The differentiation process has advantages and disadvantages. In many countries, particularly in the Finnish case, the following features of differentiation may be identified:

- All teacher groups of the school system have specific teacher education (teachers of kindergarten, elementary, secondary, adult education and vocational teacher education with dozens of different tracks). The aim has been to educate specialized experts for different levels of the educational system.

- The identity and taskspecific role of teachers of different subgroups is an integral part of the reproduction process in their education.
- Teachers are a part of their professional and cultural tradition, and they create their own tradition themselves.
- Communication between different teacher subcultures becomes more difficult the more differentiated their subcultures become.
- Each teacher group has its own subcultures (Grossman and Stodolsky 1995), which has also meant isolation in the teaching profession. In the worst case, teachers do not necessarily have the willingness or ability for constructive communication with other teacher groups nor with other representatives of educational institutions or stakeholders such as parents or representatives of work life and cultural life. We have to remember that these groups have also gone through their own differentiation process.

The differentiation has meant that members of each group have specialized in their own area and are experts in it. On the other side of the coin, there is an isolation and lack of cooperation in joint efforts to develop schools and education. In Habermas' theory, the ideal of communicative action is introduced. Communicative action is a linguistically based means which aims to create understanding between different subgroups and their members. It is also a medium for understanding the situation with its values and norms and connecting education with its ethical and social purposes in a society. A recent claim of that kind of effort is also introduced by W. Carr and A. Hartnett (1996), for example, in their strong call to struggle for democracy.

Habermas describes the functions of communicative action. These may be summarized as follows (Habermas 1987, 63):

- transposition of cognitions, obligations and expression onto a linguistic basis
- reaching understanding
- coordinating action
- socializing actors
- transmission of culturally stored knowledge
- fulfilment of norms appropriate to a given context
- social integration
- serve the construction of internal controls on behavior, in general, the formation of personality structures

Communicative action needs linguistic communication. According to Habermas, the aim in a society should be that all people would have the opportunity to participate equally in communication. In education people should have means for communication, but also for being critical and acting in an emancipatory way for making our world more just.

The second differentiation process in the Habermasian theory is the differentiation of lifeworld. Lifeworld is constructed by culture, society and person level components, which together form our concepts of life. At the same time as the social system has been differentiated into more and more subsystems, a common lifeworld has dispersed. Habermas defines lifeworld in the following way: "We can think of the lifeworld as repre-

sented by a culturally transmitted and linguistically organized stock of interpretive patterns" (Habermas 1987, 124). In earlier times lifeworld united people because this stock of knowledge supplied members with unproblematic, common background convictions that are assumed to be guaranteed (Habermas 1987, 125). In the differentiation process, lifeworld lost its collective steering power.

Habermas is a representative of modernism (Habermas 1989), which describes a society before postmodernism. Habermas has been criticized that his theory is no longer valid in the current world, which has lost common values and unified ethical principles. The postmodern world is a moving mosaic, and there is no educational collective objectives which could be shared by different partners.

Although Habermas may be criticized as the old modernist in the postmodern world, we have to take seriously his call for communication and partnership. The differentiation and along with it the value splintering is reality in our world regardless of whether it is labelled modern or postmodern. The need of more communication and partnership is obvious in many recent teacher education studies and publications (for example, Hargreaves, A. 1995; 1996; Grimmett 1995; Hargreaves, D. 1994; Lieberman 1990; 1996; Smyth 1991). They emphasize the importance of collaboration between educational institutions and working life, universities and schools, schools and local communities, teachers and parents.

Habermas has described the qualities of an ideal speech situation, in which all participants could present their own perspectives and seek together the common best. This ideal may be impossible to reach, but it gives a goal for our efforts. The conditions of ideal communication have to be seen as a direction into which we have to open the gates. In the development of teacher education, it means that different educational partners should be activated to develop education and teacher education together. We cannot probably achieve any consensus in the postmodern world, but we have to be more aware than ever of different voices and needs. We have to be open to different expectations and also articulate in a communicative way our own views as teachers and teacher educators. The important objective in teacher education is to facilitate the creation of an open, communicative approach to educational questions by teachers in their work on local, national, and even global levels.

The third rationalization and differentiation process is the uncoupling of system and lifeworld. Habermas describes the process of uncoupling system and lifeworld by the concept colonization. The steering power is no longer values and cultural, ethical or other aims of social integration but money, faceless market forces and bureaucratization. It means that, "In the process, system mechanisms get further and further detached from the social structures through which social integration takes place. As we shall see, modern societies attain a level of system differentiation at which increasingly autonomous organizations are connected with one another via delinguistified media of communication: these media mechanisms — for example, money — steer a social intercourse that has been largely disconnected from norms and values, above all in those subsystems of purposive rational economic and administrative action that, on Weber's diagnosis, have become independent of their moral-political foundations" (Habermas 1987, 154).

The process of detachment of values and a common cultural stock of knowledge has consequences at all levels of social life: society, culture and personality. "The uncoupling of system and lifeworld is experienced in modern society as a particular kind of objectification" (Habermas 1987, 173). This has consequences in everyone's life, at a structural level of society and also at a personal level. There is a real danger that people no longer see the real aims of education but only short-term economic purposes. The consequences of the prevailing tendency is the utilitarian life style of "specialists without spirit", and the aesthetic-hedonistic life-style "sensualist without heart" (Habermas 1987, 323). Habermas warns that people lose meaningfulness in their life: "Ethical obligations to one's calling give way to instrumental attitudes toward an occupational role that offers the opportunity for income and advancement, but no longer for ascertaining one's personal salvation or fulfilling oneself in a secular sense" (Habermas 1987, 323).

Habermas defends modernity because of its intention to find consensus. It may be difficult to find common objectives in the postmodern world. The unifying values have been splintered. But without communication and cooperation it is impossible to make education a powerful force in a society. The postmodern world requires serious efforts to create new partnerships between different groups and stakeholders.

Habermas use the term "horizon" to describe the situational factor which helps those involved people to have a common understanding. If the horizon changes, the interpretation of the situation becomes difficult. Habermas uses the expression of a movable horizon. The changing circumstances mean that the movable horizon points to the complexity of the lifeworld. It loses its triviality and unquestioned solidity (Habermas 1987, 123–124).

The differentiated world consist of many subgroups, all of which have their own lifeworlds and horizons. In the postmodern world there are at the same time many interpretations. Our present world and especially all scenarios point out that we are living increasingly with a movable horizon. In a familiar, unchangeable situation, the context creates a safe guide for how to work and act. But if some surprises — accident, structural changes or new pressures — emerge, the situation loses its familiarity. We have to be ready to evaluate our direction continuously. Even though it may be impossible to find any consensus, we have to try to clarify the horizon of all partners of the action and what is relevant from their standpoint. Especially in changing situations, it is important to become aware of our own and other people's horizon.

In the educational field we may recognize these phenomena. The changes in culture, economy and politics are continuous. We are living with a movable horizon. This forces, or should force, educators including teacher educators to question familiar and safe routines which have grown with tradition. The only way to meet the future is continuous efforts to activate communications with different partners in society.

Evaluation of effectiveness in teacher education could be a way to seek shared understanding for development of teacher education. This requires, however, a new approach in evaluation. It could be called "communicative evaluation", which means that different partners — administration, teacher educators, teachers, students and stakeholders such as parents — ask together and openly for better chances for education. Evaluation is not

a means of ranking or blaming. It is a process for seeking the common best. The condition for this kind of evaluation is a conception of the teaching profession which wants to enhance teachers' opportunities to take a responsible role in a society. The writer of this article sees that a communicative evaluation has three functions, with its purpose being to build bridges between different partners for enhancing educational opportunities for all.

4. Principles for the evaluation of effectiveness of teacher education

In this article, the evaluation of effectiveness in teacher education is seen in the frame of reference of the critical theory and communicative action. Evaluation of effectiveness is called communicative evaluation, and this kind of evaluation is seen to have the following three functions: (1) **revelation**, (2) **anticipation** and (3) **aiming for communication and partnership**.

4.1 Revelation

Basically, effectiveness includes the notion that teacher education should have effects on teachers, and these teachers' qualities should have an impact on school life (for instance, school culture and student learning) and on other forums of a society (democracy, justice and human rights). The idea that teacher education has or should have consequences and an impact on school life and on a society is an obvious ground for the whole endeavor of teacher education. However, it makes a difference what kind of outcomes are expected. The evaluation of the effectiveness of teacher education has different objectives depending on a theoretical and epistemological framework. The evaluation should help us to see what results have been achieved and under which conditions. The evaluation should also reveal what kind of consequences the epistemological framework of teacher education and teacher development have for the objectives and results of teacher education. There are many reasons why revealing is needed in evaluation of teacher education. We also have to become aware of hidden barriers to achievements.

We are an integral part of our contextual cultures and traditions, and we reproduce them by our own acts. This causes blindness to achievements and shortcomings. In many countries there seems to be a persistent dilemma between changes in society (in economy, work life and society structure) and the educational system including teacher education. They are changing at different tempos or in different directions, or some parts of them try to keep from changing.

There are many voices claiming that teachers and schools are changing very slowly — if at all (Garman 1995; Grimmett 1994). Cuban writes very pessimistically: "Not surprisingly, many reforms that were intended to alter the fundamental structures of school-

ing met with little, if any success. Some of the reforms have succeeded in altering the vocabulary used by policy makers and practitioners" (Cuban 1990, 75). Marvin F. Wideen gives an overview on the problems of teacher education: "Teacher education has to face the strong and compelling argument that the perceived failure of the schools rests upon the shoulders of those who prepared teachers for those schools — the teacher education within faculties of education. Although schools have always been the scapegoat for all the assorted ills of society, today's criticism seems to have adopted a stronger tone and one that is much less forgiving" (Wideen 1995, 1). Her article describes reasons which have caused ineffectiveness in teacher education. The most important causes are teacher education institutions' marginalized status in universities, technical-rationalist tradition in teacher education and low pedagogical standards among teacher educators. The revealing function of the evaluation means that we have to seek openly what kinds of causes and interconnections exist in achieving high and low results.

Weak effects of teacher education have been seen as a problem as early as 1975 by Lortie and later on by researchers of teacher socialization (Zeichner and Gore 1991). Research on the socialization of teachers has raised a serious question about whether teachers learn a new teaching culture because of the strong pressures of traditions in schools and teacher education. Zeichner and Gore (1990) invite more research to focus on the problem area of teacher socialization.

Socio-constructivist research has deepened our understanding about why changes are occurring so slowly in schools and teacher education. It has also created a new approach for implementing reforms. An individual teacher or teacher educator cannot change an organization. Reforms and new practices need collegial cooperation. Most changes require the whole educational community to learn new concepts or reorganize its earlier beliefs, values and attitudes. But these, on the other hand, call for a new organization culture and new leadership.

In addition to these barriers from inside, limits for effectiveness of teacher education have also been caused by the administration and the poor economy of the school system. These may erase the effects of teacher education. If there is a very inflexible curriculum, if teachers have very little freedom in their work, and if teacher education has steered new teachers towards professional autonomy and responsibility, there will be tension between new teachers and the administration. In some cases, there may be totally different economic and material facilities than in the schools linked with teacher education. New teachers have many abilities and skills such as in new information technology, but if schools lack basic facilities in that area, it may be impossible to implement those potential qualities.

Teacher education has many levels at which effects should be seen. These levels include student teachers, teachers in schools, students in schools and education in general in a society. It is a danger that the multilayeredness makes us blind to figuring out the urgent needs for development.

The important task of evaluating effectiveness is to reveal what is not achieved and why. We need to be aware of the barriers for effects from outside and inside. And we also

need to know what expectations different partners have of teacher education and why they have these expectations

We may summarize the tasks of the revelation in the evaluation of effectiveness in teacher education using the following critical questions:

- How well have the objectives of teacher education been achieved?
- What is the quality of knowledge and learning in teacher education?
- Why have objectives not been achieved and what are the barriers to results in teacher education?
- What kind of new objectives should be set for teacher education?
- What kind of consequences does an epistemological framework of teacher education and teacher development have for evaluation methods and results?
- What expectations do different partners have of teacher education and why they have their expectations?

4.2 Anticipation

We are living with a movable horizon. Changes in culture, society structures, politics, work life and global problems like violence, refugees, poverty and criminality cause new needs for education. A learning society offers a lot of opportunities, if people learn to utilize them. There are continuous processes of change.

In the evaluation of teacher education, we have to clarify the horizon of teacher education. The meaning of evaluation is different depending on the standpoint and how clear a vision we have of the direction in which we are going. Objectives of teacher education always originate from a certain historical and socio-political context. Evaluation usually comes afterwards or during the educational process. The context is different from what it was in the planning phase.

It is not self-evident that the objectives or their interpretations are still relevant in the current situation of a school and a society when effectiveness is investigated. It is also possible that a new situation require totally new objectives, which could not have been set in earlier years. It seems that occupational life and the demand of a learning society requires more powerful teacher education in areas of new information technology and intercultural learning. These objectives probably were not as acute earlier as they are nowadays.

Evaluation should open ways to a better future, not only for looking backwards. This means that evaluation is not a judge but a tutor or advisor. It should help to anticipate new needs and challenges. The perspective of the future draws a horizon for evaluation. We should aim to foresee in which way teachers and teacher educators can make their impact on the development of society. Objectives of teacher education have to be seen as a more or less continuous debate rather than a stable, fixed state.

Trying to find a new horizon helps to see a new direction for teacher education. The orientation to the future is difficult because we are all part of tradition, which forms us and which we reproduce. In addition to this, there are always delays of effects in teacher

education. In most cases effects of teacher education may be seen only after many years. Four to five years of teacher education is very common in many European countries. Some outcomes of student teachers' learning may be seen very soon, but many important qualities such as inquiring, learning capacities and initiative may be seen after they have left their teacher education institutions. The changes in a society are rapid and continuous. The school for which teachers were prepared some years ago has probably changed or is changing with other institutions in a society when the new teacher starts his work. In this sense all pre-service teacher education is out of date. Society is moving towards something which teachers could not see clearly during their education.

4.3 Aiming for communication and partnership

When conceptualizing effectiveness, it is important to see that effectiveness is not synonymous with efficiency. Effectiveness means that something works well and produces results that were intended. Efficiency is a relationship between input and output. Efficiency means that a person, machine, organization, system etc. does something well without wasting time or energy. Input may be economical or human resources and output may also be counted as degree costs, study lengths, teacher-students ratios etc.

The pressures towards teacher education are coming increasingly from different sectors of society. The important task of the evaluation is to add communication between different groups. Expectations are high, and we may ask how the current culture of teacher education is going to meet those requirements.

There are different options:

- One is to adapt to serve as technicians. In this way, we will lose the power of education in society.
- The second option is to defend teacher education with its historical traditions trying to keep the status quo. This reaction cannot work in the changing world, either. We are in a continuous movement culturally, politically and economically. Teacher education cannot stay in a vacuum. It has more tasks than ever.
- The third alternative for teacher education is to seek a new partnership with different stakeholders without losing its educational and cultural mission (Grimmett 1995; Hargreaves, A. 1995). This option opens a new scene for evaluation. Evaluation of effectiveness is not ranking teacher education institutions or measuring narrow, easily available results. The reference frame of the teaching profession, teacher development and teacher education has consequences regarding how to evaluate effectiveness of teacher education. The aims and tasks of the teaching profession may be considered in the light of interest of knowledge (Niemi 1993; Habermas 1971). If we are expecting technical rationality in teacher education, the evaluation will be focused on skills and narrow competence. If the aims of teacher development and teacher education are to educate teachers as practitioners who focus on classroom practice and understanding it, the tasks of the evaluation are also at the practical level of interest of knowledge. If a teacher is seen from an emancipatory viewpoint, the task of teacher education is to be a means for revisioning education (Garman 1995, 31; Tom and Valli 1990).

In the following description, the tasks of communicative evaluation have been identified on different levels of education for increasing cooperation and partnership in teacher education:

University or higher education level. In most western countries teacher education is organized either in universities or in non-university higher education institutions. In both cases there have been problems. In the university context the marginalization of teacher education departments, low academic status and lack of cooperation with other academic faculties have been identified many years. One of the most important tasks of the communicative evaluation is how to create a new teacher education culture, in which teacher education is seen as a joint endeavor in the whole university.

The same kinds of problems of isolation can also be seen in other higher education contexts. In addition there are difficulties in how to organize flexible academic routes for teachers to continue their education and connect a research component in a relevant way with their profession.

Pre- and in-service connections. Lack of a continuum from pre-service to in-service teacher education is a reason why teacher education is ineffective. In changing circumstances teachers need support to meet new challenges. There is a clear need of better coordination between pre-and in-service teacher education. It is, however, important to see that in-service cannot be any ready-made package for teachers. In-service should be seen as a support for teachers' personal, continuous growth process in a learning organization. This means that in-service cannot be only a few random seminars but a joint plan of the school community for developing its working culture. The important qualities in in-service teacher education are opportunities to share ideas and learn together.

Teacher education and connections with working life. Occupational life is changing rapidly. Teachers should have a scenario of how to prepare their students for future demands. Teacher education programs usually focus on teaching and learning in classrooms. It is a danger to forget the society outside. Many European high-level documents emphasize the importance of cooperation in working life and all levels of educational institutions (Cochinaux & de Woot 1995; White Paper 1995).

Cooperation between teachers. The teaching profession has a long history of working alone. The new concept of learning organization requires a new working culture. There is also a tendency towards decentralization in many countries. The more responsibilities teachers have in the school system — for example, curriculum development— the more they have to cooperate.

There are also several subcultures of different school subject matters in schools. They often cause barriers between teachers, but they could also be richness in school life. Their impact on school culture should be analyzed for having more interaction between different teacher groups.

Partnership between schools and local communities. The concept of a learning society stresses that learning should be a joint task and goal everywhere in the society. Learning also happens outside schools. All expertise in local communities should be joined for better learning opportunities. Schools are becoming learning centers, and their task is to activate learning of different learners and facilitate collaboration of different

partners. Without active interaction with partners from local occupational life, representatives of culture life, social workers and parents, the objectives of a learning society will be erase.

Schools and international interaction. New generations have to grow to see the necessity of international cooperation. Many future occupational tasks' prerequisite is readiness to understand different cultures. Many future problems (environmental questions, poverty, ethical issues in general) are also global. Schools should encourage their students to collaborate with representatives of different cultures and also to utilize the new information technology in this cooperation.

Evaluation of teacher education is seen as a means for advancing teaching and learning in an emancipatory direction. The tasks of teacher education are much wider than only producing certain skills in teachers. Broader objectives require stronger collaboration with different partners. The important aim of evaluation of effectiveness is to facilitate communication and cooperation.

5. A Finnish research project on effectiveness of teacher education

The research project on effectiveness of teacher education was started in 1995 as a joint project of the university teacher education departments in Tampere, Oulu and Savonlinna. The first stages of the project were planned to be as follows:

1. Conceptualizing what effectiveness means in teacher education (1995–1996);
2. Selecting the important targets for empirical analysis (1995–1996);
3. Organizing seminars and increasing communication on effectiveness in teacher education (1996–1997);
4. Distributing results of evaluation and aiming to create a new communicative evaluation culture in teacher education between different partners as such administration, teacher educators, teachers, students and different stakeholders such as parents and representatives of working life (1997–1998).

The project defined the concept of effectiveness using the dimensions of educational outcomes introduced by the National Board of Education in Finland (Jakku-Sihvonen 1995, 9). According to this model, educational outcomes consist of three components: efficiency, effectiveness and economy. The evaluation project on effectiveness of teacher education focuses only on the component of the effectiveness. This concept defines that education is effective when the skills it produces both qualitatively and quantitatively advance the mental growth of the individual and the development of society, culture and working life. This definition was the starting point, and it was placed in the framework of communicative evaluation. The functions of evaluation have been seen as revealing, anticipating and aiming for communication and partnership.

The project selected three levels for evaluation: **Culture, society** and **personality.** These form in Habermas' theory structural components of the lifeworld. Each of these

levels has special tasks in the reproduction process. In this way the project wanted to emphasize that effectiveness of teacher education is a multi-layered phenomenon.

Culture consists of facts, norms and experiences. These are all socially constructed. We do not have knowledge without tradition, and we also participate continually in reproducing this tradition. Habermas defines culture as the stock of knowledge from which participants in communication supply themselves with interpretations as they come to an understanding about something in the world (Habermas 1987, 138).

In the evaluation of effectiveness in teacher education, the cultural level consists of objectives of teacher education. The evaluation should reveal how well objectives have been achieved and what have been the main barriers in achieving results. Teacher education is one manifestation of culture. It has been formed in the process of the cultural reproduction process and is also part of this process. There are no absolute objectives and contents of teacher education. They are always socially constructed in certain social, political and scientific situations. The task of evaluation is also to analyze how relevant objectives are and how they should be developed anticipating future demands.

As the **cultural level** studies in the research project on effectiveness of teacher education, the following themes have been selected as important targets. Some of these targets arise from earlier needs; some are new objectives which are rising with a moving horizon:

- teachers'abilities to promote active learning at schools
- teachers' abilities for curriculum development
- teacher' readiness for new information technology
- teachers' readiness for media education
- teachers' readiness for partnership in educational tasks
- teachers' abilities to encounter and handle moral dilemmas in school life
- teachers' abilities to promote intercultural learning

Society, according to Habermas, is the legitimate order through which participants regulate their memberships in social groups and thereby secure solidarity (Habermas 1987, 138). Society level consists of relationships between different systems. Institutional structure, administration, power control, and cooperation between different partners are phenomena which belong to the society level. In teacher education the crucial issues are how independent a status teacher education has and what kinds of relationships exist between teacher education and representatives of administration. Additionally, relationships to local schools and school life as well as work life in general have long been areas where more cooperation has been requested. There is a lot of evidence that problems, open or hidden, exist in the relationships of teacher education to other educational subsystems and stakeholders.

The **society level** studies of the research project focus on the following themes:

- How have relationships between teacher education institutions and other educational institutions promoted or hindered the effectiveness of teacher education?

- How would different partners (work life, parents, local community, administration) like to develop teacher education?
- How can more cooperation between teacher education and different stakeholders be activated?
- What does gender equity mean in teacher education?

Personal level means the competence that make a subject capable of speaking and acting, that puts him in a position to take part in the process of reaching understanding and thereby to assert his own identity (Habermas 1987, 138). Personal level competence does not mean general competence, which teachers are assumed to have. It is more their personal interpretation of what the teaching profession means to them and how they would like to develop as teachers. The personal level focuses very much on the teacher's growth process and identity formation. If the teaching profession is seen as an ethical profession, teachers' commitment and responsibility are important aims.

Teachers' own growth processes have become more important during the last ten years as new metaknowledge of teaching and learning have emerged. It seems to be quite obvious that teachers themselves have to learn to be learners in their profession. In the Finnish context, studies concerning teachers' professional growth have been conducted by Järvinen et al. (1995), Niemi (1995), Aho (1986; 1989), and Uusikylä (1990). All writers are convinced that teachers need more support during teacher education and also in-service education to strengthen their identity as ethical professionals. The new role of teachers in a world with a moving horizon requires awareness of one's own identity.

Personal level studies of the research project are the following themes:

- How has teacher education supported teachers' growth and identity as representatives of an ethical profession?
- In which way should teachers' growth as life-long learning be supported in the future?

On all three levels — culture, society (social organizations) and personal — principles of communicative evaluation — revelation, anticipation and aiming for communication and partnership — will be implemented. Empirical data will be collected using qualitative and quantitative methods which help to understand both subjective and objective experiences in teacher education.

The aim is that evaluation is an unending process. Life with a movable horizon requires continuous questioning about what should be the direction and forms of teacher education. The study themes which have been mentioned are ongoing projects, but this does not mean that they cover all important evaluation targets. The purpose is to form a research network on effectiveness of teacher education. There are many other themes on the levels of culture, society and personality. We also have to remember that effectiveness of teacher education is not an issue of only one level. It is in mutual interaction with all these levels.

6. Summary

The purpose of this article is to give a theoretical conceptualization of what effectiveness is in teacher education. The crucial question is what consequences does the concept of teacher development and the teaching profession have for evaluation of effectiveness in teacher education. The writer emphasizes that teachers are representatives of an ethical profession and they have an important role in the course of implementing democracy, social justice and human rights. The evaluation of teacher education should be in line with these purposes.

In the article, Habermas' theory of communicative action has been used as a reference for understanding recent problems of teacher education. The differentiation process in modern society and the uncoupling of system and lifeworld has caused isolation and lack of cooperation. In the Habermasian framework critical thought, communication and partnership become important criteria for effectiveness. The functions of evaluation have been seen as revealing, anticipating and aiming for communication and partnership.

In the Finnish research project, the evaluation of effectiveness has been placed on three levels of effectiveness: Culture, Society and Personal. According to Habermas, these structural aspects form the background and the resources for communicative action. A cultural level consists of quality of knowledge and learning as important forms of cultural reproduction (for example, teachers' competence to promote active learning in schools, teachers' readiness for new information technology and for media education, teachers' abilities to encounter and handle moral dilemmas in school life). A society level consists of interaction of teacher education with different institutions in a society — collaboration with structural and social institutions and teachers' readiness to cooperate with different partners. The personal level consists of teachers' professional development as an individual learning process and formation of identity. Teachers' professional development at different stages of the teaching career will be evaluated. The main goal of the project is to get knowledge for developing teacher education and to facilitate its becoming a real partner in the modern and postmodern learning society.

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The starting points and main principles of evaluation in a project focusing on the effectiveness of teacher education

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Abstract

The article aims at clarifying the idea of evaluation as a basis for the evaluation of the effectiveness of teacher education. After defining evaluation and examining its development, the various paradigms of evaluation are discussed, on the basis of which the methodological basis for researching the effectiveness of teacher education is analyzed. Based on a literature review and the discussions conducted in the project, the principles which characterize evaluation in the project which examines the effectiveness of teacher education are outlined, and the strategies used in the various substudies to implement evaluation in practice are described.

1. Introduction

The debate on the quality of education has gained strength in different countries as a result of reduced economic growth. Accountability is emphasized on the level of both schools and universities, and sharp analysis and restructuring of both economic and administrative factors is demanded to help to make more efficient use of the available resources. Teacher education is also subject to vigorous debates. What is its contribution to the efforts to develop as high-level education as possible into a national resource? Is it perhaps to blame for the current situation in which school is criticized for its inability to respond to the challenges of the day? Is the teacher education system capable of educating sufficiently high-quality teachers who, as part of the nation's educational system, are able to offer the best possible education to the entire nation? It has been suspected in Finland, where almost all of the teachers are educated in universities, that university education in particular is expensive and ineffective, and what the quality of teacher education is like as well as what the right place for it is has also been questioned.

The teacher educators have participated in the discussion on quality in quite different ways. Some have rejected all criticism, while others have risen to object to it without doing anything. But advance measures have also been taken to maintain the quality of teacher education. The public debate has been participated in actively in Finland through discussions and writings. Various units have also initiated a number of projects to develop teacher education especially after the evaluation which was carried out by the Ministry of Education in 1993–94. As a result of the work of the evaluation group, the significance of continuous evaluation in the development of teacher education was emphasized. It was also observed that very little research data was available on the effectiveness of the developed teacher education in Finland. The research on the effectiveness of teacher education in Finland started from these discussions.

The need for evaluating teacher education is increased in Finland by the following factors, for instance (cf. Buchberger & Byrne 1995):

1. The political significance of education has become greater, leading to increased quality demands which also apply to teacher education.
2. The system of decision-making related to schools and teacher education has changed in such a way that teacher education, which used to be tightly controlled by regulations for uniformity, can be different in different units. Accordingly, the development and evaluation of curricula has been moved to the level of schools.
3. Reduced economic resources force the various teacher education institutions to consider optimal exploitation of the existing resources and to search for new ways to finance their activities. With the universities currently accountable for their results, various quantitative performance indicators have been developed to direct their activities.
4. Fast expansion of the open university system and the relaxed qualification requirements for teachers force the teacher education institutions to re-evaluate their own activities and to develop alternative methods and channels of study.
5. The changing society places greater hopes and new tasks on teachers and schools. In these conditions new abilities are required of the teachers.
6. The new research results on learning to be a teacher and learning in general bring up the requirement that both the learners at school and university students must be thought of as active and autonomous learners.

Thus the need for evaluation in teacher education seems to be increasing greatly. The situation is similar to that in other public activities as well (cf. Sinkkonen & Kinnunen 1994). What evaluation means in this connection, which functions it has in teacher education, and how it can be carried out in teacher education and in this research on the effectiveness of teacher education in particular are some of the problems which will be discussed in this article. To understand and define the nature of evaluation, it makes sense to examine briefly the development of the thinking and practices related to educational evaluation especially in the last two decades.

2. The changing picture of educational evaluation

Understanding the different paradigms of evaluation which is discussed in the next part of this article presupposes a brief historical review of the development of evaluation. It is not, however, easy to provide such a review. It is also impossible to provide any commonly accepted definition of evaluation, as the different aspects of this activity are quite varied and so are the views of evaluation among different researchers. The development of the evaluation of education has been dealt with in different countries by Worthen & Sanders (1991) and House (1993) in the United States, Norris (1990) and Elliot (1991) in Great Britain, and Konttinen (1994) and Raivola (1995) in Finland, among others. The development in the field of evaluation has been enormous, and the conception of its nature is changing and developing all the time. By the end of this century we will therefore even be able to refer to evaluation as its own discipline of science which is pursued using highly different methods in the field of different social activities (Scriven 1994).

In the 19th century, the decisions and choices related to education were based on different beliefs and opinions, with a few exceptions. Measurement and evaluation were thought to be synonymous, and evaluation only meant quantitative measurement of school achievement. The **actual evaluation of education can be thought of as having evolved from testing**, which was general and encompassed whole states by the mid-20th century. The development of tests proceeded and was beginning to get industrialized. The evaluator was a technician who helped to classify, select and locate people, and thus to evaluate performance and staff, which still forms part of evaluation.

On the other hand, program evaluation did not really start to develop in the United States until the 1950s. The development of program evaluation is connected with the examination of the effects of social policy. In the various areas of social activity, different programs have been devised to solve certain problems and to bring about reforms. In such cases, it is up to the evaluator to find out if the programs financed by society work, i.e., if the goals set for them are **reached**. The evaluation was not targeted any longer at individual learners but at entire programs, and the training of experts was started for their evaluation, with the aid of whom the programs could be improved and the goals could be reached more efficiently than before. For almost half a century, program evaluation has been thought to be evaluation proper, and its connections with the other areas of evaluation have been forgotten.

The development of program evaluation was speeded by the so-called Eight-Year Study Project, which was launched as early as the 1930s. The Tylerian model or goal evaluation which evolved from it has especially directed the evaluation of curricula for quite a long time, and its effects are still to be seen in certain models of evaluation. Evaluation was essentially thought to mean the definition of the realization of goals, while education was about changing the behavior of students in the desired direction, and the curricula therefore needed to specify in detail the desired behavior in the different areas that were considered to be desirable goals. Methods were developed on this basis, and the results achieved at school were compared to the desired results (Norris 1994). The

successful Sputnik flight by the Russians speeded up the development of curricula in mathematics and science subjects in particular. Simultaneously support was given to the evaluation of important large-scale projects that were thus born. However, the existing methods with their experimental setups and survey studies were highly disappointing. Cronbach published his famous article (1963) in which he criticized the prevailing practice and called for new approaches. The prerequisites for the development of evaluation were created in this way. Although evaluation still gained more strength in the United States in the 1960s, there was increased dissatisfaction, and it was obvious that there was a need for new approaches and strategies in evaluation.

In the late 1960s many classical articles on evaluation were published, strongly promoting a new kind of thinking in evaluation. **The evaluator was now thought to be a describer** who analyzed the weaknesses and strengths of a program in relation to its goals. The action-directing, formative nature of evaluation was emphasized. At the same time evaluation started to be considered as an increasingly multidimensional, situational and political activity which required many other abilities in addition to the technical one. More emphasis was placed on the responsiveness, or usability of evaluation from the recipients' point of view. Since then, the usability of evaluational findings has been especially emphasized by Patton in many of his writings (for example, 1980). Some of the classical methodologists, especially Stake (1967) and Scriven (1967), emphasized that the evaluator himself had to make clear conclusions on the basis of the materials which he had gathered; i.e., he had to pass clear judgment on how useful and efficient the functioning of a program was in relation to the goals and to the factors which restricted and promoted action. Thus the evaluator was also expected to be a **judge** (also see Raivola 1995).

Scriven also placed emphasis on the worth of a program and not just its concrete merit which refers to the achievement of the goals set for the program. Meanwhile the worth of the program involves information about the necessity of the program — i.e., whether or not it is worth continuing at all: what the goals of the program as such are, how the action is justified, what its internal logic or its underlying philosophy of action or theory is like.

Although the previous methods of evaluation as well as the tasks and roles of the evaluators were examined critically, the belief in the usefulness of evaluation grew. It developed into an essential and permanent part of education in the United States, with the focal point moving from large-scale projects supported by the federal state to activities initiated in the districts and on the local level. The next twenty years were marked by all-around development of evaluation, construction of different models of evaluation and professionalization of the field which was seen in the reformation of the training of evaluators and in the increase in the number of scientific communities, professional congresses and journals, as well as in wide-spread business activities.

The main features of the new wave of evaluation, the alternative paradigm, got their shape in the 1970s simultaneously in Great Britain and in the United States. The essential thing was thought to be the collection of qualitative data, i.e., the interest was focused on the participants' subjective experiences. It was the evaluator's task to illuminate the stage

where the program worked (the so-called illuminative evaluation). On the other hand, more information than before was needed about the context in which the program to be evaluated was being implemented, which is why the focus in the evaluation of programs was on case studies (Elliot 1991). Qualitative methods of evaluation were written about and discussed a lot, but their acceptance has been slower on the practical level. Perhaps the best-known of these elaborations was the naturalistic paradigm described in detail by Guba and Lincoln, which was later labeled constructivist and which can be considered a highly important attempt at systematizing qualitative evaluation research (Guba & Lincoln 1981; also see Aaltonen 1989; and Pitman & Maxwell 1992).

The approach called democratic evaluation, elaborated by MacDonald (1971) and reformulated by Elliot (1991), is also exceptionally interesting even today. These fourth-generation evaluation models actually involved an obvious change of paradigm in comparison to the earlier approaches. The conception of reality was clearly relativistic, so there is no single truth and the truth presented by the evaluator will not please all the involved parties and audiences. The basis for the new kind of thinking was provided by pluralism and serving the object of action in such a way that the evaluator is actually functioning as the initiator of discussion and director of the learning of the organization. Every program has its own community which includes many kinds of individuals who must take care of highly different interests, utilitarian points of view etc. In teacher education, for instance, the students, the staff, the administration, the rest of the university, and the schools are quite different parties, while the audience includes the taxpayers, other researchers, and so forth. Therefore the evaluator becomes a **negotiator**, who arbitrates between different views but tries to act in a way which develops the program further all the time.

This ideal of democratic evaluation is interesting from the viewpoint of the research of the effectiveness of teacher education. The model assumes that evaluation is clearly connected with having an influence on decisions and is thus political activity by nature. The basis of evaluation differs essentially from the models of bureaucratic and authoritarian evaluation which are subjected to a greater extent to the control and politics of action designed by the authorities (for more details, see Laukkanen 1994).

The evaluation of the effectiveness of teacher education which is being launched here started from within and was not commissioned by the Ministry of Education, nor did it result from any educational obligations set by the Ministry. The planned evaluation resembles democratic evaluation in which it is essential to serve the whole community. The basic value in democratic evaluation is the well-informed citizen. It is committed to the values of pluralistic democracy. The evaluator gathers different definitions associated to the program by the participants and the reactions connected with them. Another important feature is consideration of the context and concentration on cases. This viewpoint is sharply different from the paradigm according to which the educational programs which are developed are standardized processes which can be directed to produce similar results in different contexts. Democratic evaluation is about illuminating the quality of the program in social processes in which varying groups participate in the context in question — teachers, students, public servants, program developers and sponsors who interact

with each other to defend, maintain and change their mutual and often conflicting interests.

The essential thing is the confidentiality of action, different negotiations, availability of knowledge and the right to know and express freely one's own views. According to Elliot (1991), democratic evaluation can be interpreted as a common learning process in which the members of a political community debate with each other as equal members to find solutions for their common problems, which is in accordance with the ideals of action research. It is the duty of the researcher or evaluator to promote first-level action research — i.e., the participants' various development and evaluation projects — by teaching them to evaluate their own work, and to perform metaevaluation of these studies conducted by the participants. The research which is being started now includes some substudies which are implemented as evaluation similar to action research, such as the evaluation of the teacher education program oriented to international tasks (see Räsänen).

3. Different paradigms of evaluation

The various trends of evaluation are reflected in current literature on evaluation which Greene (1994) criticizes for excessive focus on the method. The concepts in use are still not clear, and the background of the different approaches has not been considered profoundly enough. Some progress has, however, been made in certain recent writings, the paradigms underlying different models and methods have been examined theoretically and methodologically, and the different approaches to program evaluation have been categorized and clarified on their basis.

Greene and McClintock (1991), among others, find that the evaluator still had access to only one approach, the experimental model, in the mid-1960's, whereas he can now choose between very many different approaches. The choice is determined by the fundamental questions of evaluation and the different needs for knowledge among the various recipients. The other influences include the evaluator's own beliefs concerning evaluation and the political nature of the context of evaluation. Based on Guba's classification, the authors introduce three alternative paradigms in qualitative evaluation, namely the neopositivistic and interpretative ones and one which is based on the critical theory. Meanwhile Proppé (1995) refers to quantitative, qualitative and dialectic evaluation and studies the paradigms which influence them: objective, relativistic and dialectic thinking.

An evaluator who acts in accordance with **neopositivism** favors the experimental or quasi-experimental setup, although he thinks that social causality is a very complicated assumption which is based only on a certain reality. The core of studies like this is quantitative, and it is complemented by other analyses which are based on various theoretical perspectives and different values. The **interpretative paradigm** (based on phenomenology and hermeneutics), on the other hand, places the emphasis on understanding phenomena related to the human being not as social laws but as social meaning constructions

which are conditioned by time and place. The representatives of this school favor qualitative methods and think that social research is significant only if it involves values. An example of such evaluation research would be action research which concentrates on a single place or case and which aims at developing an understanding of the experiences of the various participants, what the program has meant to them and why. The interpretative evaluator is to create an integrated portrait of these various experiences, meanings and values which are connected with the program and of their connection to a certain context. The **paradigm based on the critical theory** is seen in an openly ideological approach to evaluation. The essential thing is to try to illuminate the history, structure and values forming the basis of the social phenomenon being studied, and to effect political and social changes. The difference from the other paradigms is not based on the methods but on the effort to work for a more equal distribution of social power and resources in the world. The evaluator can use both qualitative and quantitative methods, historical analysis and criticism. The critical evaluator tries to promote the cause of those people who have the least power, to support their understanding of the structural conditions that restrict their lives and to strengthen their will to effect change.

Pitman & Maxwell (1992) also stress that qualitative evaluation is not one thing and one thing only, as there is a considerable diversity in philosophical and methodological paradigms among qualitative evaluators. They discuss four different important approaches to qualitative evaluation in their article, namely those based on Patton's pragmatism, Guba & Lincoln's constructivism and Miles & Huberman's realism, as well as Eisner's artistic "educational criticism." Based on the above-mentioned authors, they formulate their own evaluation practices, thinking that the different theoretical approaches are a source of richness.

Greene (1994) later grouped the different frames of reference of evaluation into four categories based on what the assumptions related to man, the world and knowledge underlying each methodology are, what the ideological view associated with each one of them of the significance of research in decision-making is, which values are associated with the goals of the program and research, to whom the evaluation is directed, and which methods are favored in the various approaches.

He thinks that the main approaches to evaluation have become different on the basis of neopositivism, pragmatism, and the interpretative and critical schools. In terms of qualitative evaluation, the last three of these are usually referred to without making a distinction between them. Discussion about the different starting points of qualitative evaluation has started only recently, and the differences and similarities of the various approaches have been clarified.

The approaches used in the effectiveness research on teacher education, and the evaluation carried out in the project can be examined on the basis of these above schools of thought. The starting point for the project appears to be largely in accordance with the pragmatist approach, but in some of the substudies the focus tends to be interpretative, and in some of them certain features of the critical paradigm can also be seen.

4. Definition of evaluation

It is not easy to define evaluation, although at its simplest it can be thought of as determination of the value of something, which is the way it is often defined in various dictionaries. Most researchers think, however, that it is much more than just deciding the value of some thing, object, person, program or institution. In teacher education, evaluation is connected with highly different situations on different levels. It can range from the macro-level examination of individual study situations and learners to broad examinations of effectiveness and to international comparisons. The tasks of evaluation and the methods used also differ very much in different situations. This project to evaluate the effectiveness of teacher education however, is as a whole mostly about program evaluation, which is very difficult to define unambiguously. Some recent definitions of evaluation are discussed below mostly to provide an ideal towards which the project evaluation should proceed. After that the evaluation being carried out in the project is outlined by discussing some of its main characteristics.

On the basis of the different paradigms of evaluation discussed above, it can be said that the conception of evaluation is changing and developing continuously and it varies considerably depending on the evaluator's commitments and the starting points of evaluation. It can be observed by analyzing the various definitions presented in the literature that they usually place emphasis on the relation of the evaluation to decision-making and that the core function of evaluation is to determine values (Sinkkonen & Kinnunen 1994, 24–28). In accordance with this, it is essential in the evaluation of teacher education to determine the value of the nature of the activity (worth) and to examine its effectiveness (merit). The relation of this evaluation to decision-making is, however, more of a problem. It is necessary to ask whom it is meant to serve. The starting point was to gather information which will also convince the outsiders, i.e., supporters of the program, the Ministry of Education and the taxpayers, that the changes which are being made or have already been made after the national process of evaluation in teacher education are correct and acceptable. Sinkkonen and Kinnunen (1994) refer to this function of evaluation as the function of legitimization. The results of the current research can also at least suggest trends for national decision-making and the direction of teacher education. The research also has a certain symbolic function, showing that the teacher educators themselves want to maintain and improve the quality of the education. The important thing in many substudies of this evaluation is, however, to promote change on the local level immediately, which is a formative function (Sinkkonen & Kinnunen 1994, 58–59). Therefore, the function of evaluation which gets special emphasis in the research of the effectiveness on teacher education is to support decision-making and direction on different levels.

Philosophical Framework	*Ideological Framework/ Key Values Promoted*	*Key Audiences*	*Preferred Methods*	*Typical Evaluation Questions*
Postpositivism	Systems theory/ efficiency, accountability, theoretical causal knowledge	High-level policy and decision makers	Quantitative experiments and quasi-experiments, system analysis, causal modeling, cost-benefit analysis	Are desired outcomes attained and attributable to the program? Is this program the most efficient alternative?
Pragmatism	Management/ practicality, quality control, utility	Mid-level program managers, administrators, and other decision makers	Eclectic, mixed: structured and unstructured surveys, questionnaires, interviews, observations	Which parts of the program work well and which need improvement? How effective is the program with respect to the organization's goals? With respect to the beneficiaries' needs?
Interpretivism	Pluralism/ understanding, diversity, solidarity	Program directors, staff, and beneficiaries	Qualitative: case studies, interviews, observations, document review	How is the program experienced by various stakeholders?
Critical, normative science	Emancipation, empowerment, social change	Program beneficiaries, their communities, other "powerless" groups	Participatory: stakeholder participation in varied structured and unstructured, quantitative and qualitative designs and methods; historical analysis, social criticism	In what ways are the premises, goals, or activities of the the program serving to maintain power and resources inequities in the society?

Table 1. Major approaches to program evaluation (Greene 1994, 532)

When the goals of the project were considered in its early phases, however, special emphasis was placed on the relation of the evaluation to the development of teacher education and on the continuity of evaluation. Kemmis (1986), for instance, criticizes the connection of the definition of evaluation primarily to decision-making and emphasizes that in most programs no summative decision on the entire program is made but the evaluation is an essential part of the continuous process of development. This is also the case in the current research in which teacher education is seen as a large-scale social program, the evaluation of which is an essential part of the continuous development of curricula and all the activities. Evaluation is connected with all human activity; Kemmis thinks that it is present when various programs are developed even if it has not been initiated formally. The function of formal or official evaluation would be to focalize and sharpen informal critical processes and to maintain the good properties of informal evaluation. Evaluation should therefore promote the interaction between the participants, various in-

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volved parties and supporters of the program, which is emphasized in this definition put forward by Kemmis: "Evaluation is the process of marshalling information and arguments which enable interested individuals and groups to participate in the critical debate about a specific programme."

Proppè (1995) also emphasizes that evaluation is present wherever people meet each other. It is most often a very unnoticeable, complicated, living and significant part of our everyday life. "Evaluation could, in fact, be seen as one of the most complex, but at the same time the most common activities human beings undertake; it influences and shapes opinions and perspectives, and very often evaluation leads to actions, sometimes competitive, hostile, and even dangerous. Sometimes evaluation is more formal; but unavoidably it is always a part of daily life, and it has been so since human beings came into existence; because as beings evaluating the world, and our existence in it, we are humans." Proppè's (1995) definition places emphasis on finding the essential nature and value of a program, through which we learn about ourselves and our relationships to others and to the world at large.

Evaluation in this project is examined below, partly by adapting Kemmis' ideas by outlining the central ideal principles which are characteristic of evaluation and in the direction of which one should proceed in the evaluation of the effectiveness of teacher education. The principles that are presented below are, however, partly overlapping and intertwine into a description of the whole process.

4.1 The diversity of values as a starting point for evaluation

In terms of values, teacher education can be evaluated from many different perspectives, as the involved individuals and audiences have their own interests which are partly different from each other. The project should aim at clarifying the values on which teacher education is based, and at describing the uniformity and conflicts of the different values which are connected with it. It has been planned that several evaluation seminars on both the national and local levels will be arranged in connection with this project. In these seminars the different expectations, views and evaluations of the involved parties as regards teacher education are put together. In the future, the project should be responsive to these different aspirations and take them into account when the evaluation is continued.

It is essential to be aware of the evaluators' own commitments to values which may differ partly from each other, and to note that active critical discussion and the development of teacher education require that the evaluation must also involve the varying perspectives of different audiences.

4.2 The human being as the object of evaluation as a rational and autonomous individual

The starting point is provided by the idea of the human being as a rational actor, which is why the values to which they are committed are reflected in teacher education. The function of evaluation is therefore to explicate the reasoning which has directed the development of teacher education and to promote the shaping of a shared understanding from these values. Evaluation must also reveal the contextual and historical factors which have influenced the shaping of the values and promote the critical study of these things in the community in question and in its immediate neighborhood. Therefore the criteria of evaluation cannot be constructed only in advance by outsiders, and the capacity of the program to respond to the outsiders' needs cannot be considered to be the only criterion. The evaluation and its criteria are a result of several negotiations which should be carried out during the evaluation on the different levels of teacher education.

The actors in teacher education are thought to be autonomous people, but teacher education as such is a joint venture. The participants are therefore accountable together. Individual teacher educators can be morally responsible for their action only to the extent to which their own action is free from the structural restrictions connected with the organization. Thus it is another function of evaluation to show these structural restrictions.

4.3 Evaluation as critical discussion and social action

The starting point for evaluating the effectiveness of teacher education is provided by a natural critical debate on the education, its nature and values, which is always undertaken when different programs are developed. The **self-criticism** of the whole teacher education community thus provides the basis for the evaluation of the effectiveness of teacher education, and it should be expanded and developed, but not replaced, by the evaluation made in the project. The project should also try to develop continuous evaluation of teacher education, which is why **metaevaluation** of the various evaluation designs should be carried out in the project. Therefore the at least partly **outside evaluation** which is carried out in the project in addition to internal evaluation or self-criticism should not be thought of as an alternative to the self-critical process but as a process the aim of which is to add to the knowledge of certain values and interests which are relevant to the program.

The evaluator helps the critical discussion about teacher education by gathering the various experiences and aspirations related to it for use by the participants and other interested parties. At the same time, the project adds to the interaction inside teacher education and between the different interested parties, so that the different views produce authentic information, i.e., experiential information based on the participants' experiences and their different living conditions.

4.4 Usefulness of evaluation as a goal

It is not enough, however, only to promote internal critical discussion, as evaluation should **produce useful information for decision-making related to teacher education on different levels.** The research should also serve national co-operation in and direction of teacher education by bringing to light values and areas of effectiveness which describe all teacher education. In the various substudies, it should also function on the local level to control the quality of the institutions.

Usefulness is also related to continuity. The whole project can be seen as a means to establish continuous evaluation in the participating units and to enhance awareness of evaluation. At the same time, it is a common learning process for all the participants, in which the results are also used to teach the concepts of the basic assumptions of teacher education to the other members of the teacher education community. The clarification of these fundamental values and assumptions of teacher education also means analysis of the theoretical foundations of the entire education, which in turn can help to develop the education.

4.5 Evaluation as a tool for innovation

The principles described above suffice to show that the usefulness of the results from the viewpoint of the development of teacher education is clearly a criterion for successful evaluation of the effectiveness of teacher education, i.e., there are traits of pragmatist evaluation in the project. The project also includes a few intensive case studies with an action research approach. Evaluation as an approach similar to action research has been discussed especially by Kemmis (1986), and it has been developed further on the basis of his ideas by Poppè (1995). Similarly to the other approaches to evaluation, evaluation according this approach involves acquisition of information to develop action. In addition, the process aims at producing a dialogue, self-reflection and enhanced self-understanding. The essential thing is, above all, to develop the dialogue between all the participants to clarify the situation in a broad sense and in all of its dimensions. The process aims at functioning as a catalyst of continuous and innovating debate.

Dialectic evaluation is social action in which language and the aim of authentic communication are essential. The product of evaluation is, above all, increased learning and understanding. The dialogue can function in very many different ways and on different levels. The dialogue will continue even after the report has been written.

> "Evaluation as action research is an extension of optimized education in the form of active learning. The professionalization of teachers is a creative process — a process of construction and reconstruction of knowledge within the field of teaching and learning."

4.6 Suitability and flexibility of the evaluation during the process

When an evaluation of the effectiveness of teacher education is carried out, the essential thing is its suitability for the practical situation in which teacher education is at this moment. The planning of the project was started after the recent national evaluation of education to maintain continuous evaluation and to gather systematic research data on teacher education in Finland. An effort will be made to make the various substudies relevant to the new challenges facing teacher education and to the interested outsiders.

The project which is being planned should also be flexible, so that it can respond as best as it can to the changes that may emerge during its implementation and to any new needs that may arise. When the suitability of the setups of new substudies is evaluated, consideration must be made of the basic goals, the different audiences to whom the evaluation is targeted, and the underlying theory of teacher education. Numerous practical factors related to the organization and the available resources have an influence on the performance of the evaluation, the available means of analysis and interpretation, and reporting. Different types of approaches and different models of evaluation are therefore applied in a flexible manner in each evaluation situation. It would be ideal if there had been a chance to discuss the whole project and the various substudies with the various interested parties in advance and at least in the course of the evaluation to promote the responsiveness and suitability of the evaluation. The publication of the reports, for instance, should serve many different parties: the participants, the sponsors and the other researchers.

4.7 Justness of evaluation

The evaluation will have an influence on the division of power and resources in the various stages of the program, as the information which has been gathered will legitimize certain decisions. Because of this, the evaluation performed in the current project should have clear-cut principles to govern the way in which the evaluation is carried out and how the information that is gathered is used. All the participants should know, for instance, how information is gathered, to whom it is given and what risks are involved from their point of view. The evaluators need to be aware of their responsibility, they must be conscious of the consequences that the research can have, and they must develop appropriate processes to control the information. Because of this, Norris (1994), among others, emphasizes that it is important to create the prerequisites for a fair and reliable exchange of information. He thinks that the central values and principles of action should be determined in connection to the evaluation, such as deliberation, respect for individuals, and the right of the public to know about public action programs, i.e., about teacher education in this case. Action should also be unbiased so that the relationship between the provider and acquirer of information is balanced. It must be remember that even though evaluation is thought to be something good, few of us wish to be evaluated, as evaluation always

adds to the visibility and at the same time to the vulnerability of an individual. Therefore the participants must have a say in how they are described in the evaluation reports.

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The concept of effectiveness in the evaluation of educational outcomes

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Abstract

In discussions about evaluation in the education sector it has been necessary to adopt many obscure terms to describe the nature of processor and administrative reforms. These terms have subsequently had to be defined in order to make sure that education experts know what is meant by the evaluation of educational outcomes. A key term in Finnish discussions about evaluation is *vaikuttavuus* (effectiveness). The concept effectiveness is related to the concepts of educational outcomes, economy, efficiency, productivity and accountability. One sometimes sees the words effectiveness and outcomes used synonymously. A broad evaluation of outcomes in fact means evaluating the extent to which the desired effects have been produced. The evaluation of outcomes, however, involves not only the evaluation of effectiveness but of efficiency and finance, or economy, as well. This definition comes very close to the definition of *vaikuttavuus* in the conceptual framework published in the same year by the National Board of Education, although the OECD definition posits a different relationship to economy and efficiency. In this article the concepts related to effectiveness are explained as they are used most often in those reports which are part of political and administrative discussions in the education sector.

1. Introduction

Comparisons between operational models of evaluation have been hampered by the diversity of terminology. The education sector has been compelled to adopt many obscure terms (such as productivity, efficiency and effectiveness) used to describe the nature of processer and administrative reforms. These terms have subsequently had to be defined in order to make sure that education experts know what is meant by the evaluation of educational outcomes. A key term in Finnish discussions of evaluation is *vaikuttavuus* (effectiveness), which is used in a wide variety of meanings both in everyday speech and in scientific debate. I propose to examine some of the interpretations given to this term and to discuss their connections with related terms and with the debate on evaluation in gen-

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eral. The concept effectiveness is in relationship to the concepts of educational outcomes, economy, efficiency, productivity and accountability.

2. Evaluation of the effectiveness of education

Effectiveness is the intentional production of consequences by means of some action. In the context of the effectiveness of education, the implicit assumption is that these consequences are desirable. Evaluation of effectiveness addresses the question to what extent the desired consequences have been produced. The intrinsic character of education makes it difficult to obtain specific, non-ambiguous data on its effectiveness. The very notion of upbringing implicit in education eludes definition: an evolving personality is a very dynamic thing, while education is complex by nature and multidimensional in effect. The evaluator can never be quite sure to what extent effects are primary, secondary or tertiary. An educational outcome is the property of the evolving personality, and it influences the consciousness of the individual in combination with previous experiences, conceptual systems, perceptions and motivating factors.

The intended consequences of the education system can be evaluated by considering the official objectives of education as laid down in the law and expressed in curricula and by assessing the extent to which they have been fulfilled. Even here, it should be pointed out that even if students can sometimes be observed to be striving towards these objectives, this is not to say that the results are produced solely by education.

The concept of effectiveness is ambiguous itself; when using the term, one should specify both the effective actor and the effect it produces. The various meanings of the term can be charted by posing certain questions. The following point, at least, should be considered: What affects what; that is, what kind of causal relationship is involved? In the case of an educational program, the question should be analyzed/formulated as follows: What kind of effectiveness did the program seek, and what effects did it have?

In the sociology of education, in particular, there has been much interest in the specific effectiveness of education (the term commonly used in this context is 'impact'). Effectiveness is treated here as a complex phenomenon, of which various aspects are described. Education has been considered variously as having an impact on employment, domestic product, and individual happiness. The debate has focused primarily on the outputs generated with certain inputs. Even sociologists have been unable to establish a universally applicable causality between resources and outcomes.

Raivola (1992) writes: "Educational outcomes comprise two components. First, we have direct outcomes as reflected in the value added to the student's cognitive, affective-social and functional capacities. Another component, much more difficult to assess, consists of delayed outcomes, i.e. the effect of education, manifested in the form of benefit to both the individual and society: employability, income, social status and mobility, the capacity to play a role in society; or alternatively as increased production and productivity, social order and international competitiveness" (Raivola 1992, 163). Within the

OECD, von Herpen (1992, 37) has stated that education has primary economic effects on income level and employment, secondary effects on economic growth, consumption and civic values, and tertiary effects on expectations related to the education of citizens original reference.

There is a certain very understandable tension between, on the one hand, discussions of outcomes as defined precisely by the OECD and, on the other hand, discussions launched by sociologists concerning the social consequences of effectiveness. The main parties to the former discussion are officials with political and administrative responsibilities, whose specific task it is to consider the relevance of actions to society.

3. Applications of the term 'effectiveness'

The valuable stimulus to the discussion of educational outcomes provided by the OECD in the late 1980s led to the introduction of the process aspect into discussions of evaluation in the Nordic countries. In the present author's view, this extended the range of these discussions (for example, OECD 1992) from the input-process-output formula which tended to assess output simplistically, ignoring its dimensional and dynamic aspects. Methodological problems are also involved: the connection between resources, processes and results has rarely been satisfactorily determined, important though the question is and despite the constant quest for approaches to investigating the connection.

In the debate on educational outcomes, evaluation is no longer seen as merely a description of the status and results of education; the trend is to investigate the connections of results with processes and available resources, to the extent that this is methodologically possible. The Finnish word tuloksellisuus, the Swedish resultatrikhet — which could perhaps be rendered in English as 'resultness' (although the term used here is 'educational outcomes') in fact embraces the broad definition, according to which the principal function of evaluation is to determine whether the education to be assessed has functioned such as to produce "a desirable and useful educational outcome economically." This trend was strongly represented in the Ines project, aimed at developing the OECD's education indicators (for example, Nuttal 1992, 19; and von Herpen 1991, 27).

One sometimes sees the words 'effectiveness' and 'outcomes' used synonymously. A broad evaluation of outcomes in fact means evaluating the extent to which the desired effects have been produced. The evaluation of outcomes, however, involves not only the evaluation of effectiveness but of efficiency and finance, or economy, as well. An OECD document published in 1995 stakes out a position on the definition of evaluation terms, defining effectiveness as follows:

> "Effectiveness is the extent to which an activity, process or programme attains the objectives assigned to it" (OCDE/GD(95) 28, 6).

This definition comes very close to the definition of *vaikuttavuus* (effectiveness) in the conceptual framework published in the same year by the National Board of Education,

although the OECD definition posits a different relationship to economy and efficiency. In OECD publications, 'effectiveness' is used to describe both effects and, to a certain extent, practical arrangements (such as the organization of management) which the Finns tend to associate with efficiency. On the other hand, the 1994 document DEELSA/ED (94)17 ties the concept of effectiveness more closely to the outcome of action in the sense of "desired effects."

In Finnish education literature, the term *vaikuttavuus* has also been defined by Lehtisalo (1992). According to Lehtisalo (1992), "the effectiveness of education can mean its utility and outcomes as well as its efficiency — in a word, everything that should be gained and accomplished through education." As he points out, "producing an accurate overview proves an overwhelming task with our current knowledge. Whether the capabilities and skills of the learning individual or general societal evolution are in question, educational outcomes in the broadest sense are complex, have profound and prolonged effects, and are often difficult to measure other than indicatively. Cultural development, the quality of life and economic growth are complex phenomena in which everything affects everything else. The interactions are not fully known, and cannot be anticipated" (Lehtisalo 1992, 15).

The term 'impact' is sometimes used instead of 'effectiveness'. In the social sciences, in particular, the terms are used virtually synonymously. Sometimes, however, especially in the social sciences, 'impact' has a very broad meaning. Thus, Mazur (1995, p. 76) uses the term 'policy impact' in analyzing the effects on society of an administratively enforced policy of action. By the same token, the term 'impact' is occasionally used in the sense of 'effectiveness' in the context of the evaluation of educational outcomes; even then, however, 'effectiveness' is still the term of choice in the evaluation of educational programmes. More unusual is the use of the term 'impact' for 'effectiveness' in conjunction with 'economy' and 'efficiency'. The triad of effectiveness, efficiency and economy seems to have become established usage in discussions of educational outcomes.

4. Concepts related to effectiveness

The report on discussions within the OECD notes that efficiency covers all available resources, tangible and intangible, without defining their relation to the results achieved. It defines efficiency as follows: "Efficiency is the measurement of the return of an activity for a given cost or input" (OCDE/GD(95) 28, 6).

This definition is problematic insofar as subsuming the evaluation of economy and other considerations — particularly the allocation of personnel resources and their operations — under a single heading is not the only approach to education, nor is it perhaps the most practical. Discussions of efficiency are further complicated by the fact that the terms 'cost effectiveness', 'cost efficiency' and 'productivity' are very clearly defined in the sphere of economics, but these definitions cannot be readily applied in an unambiguous way to education.

In the field of education, the meaning of 'efficiency' must be defined and distinguished from costs in order to permit the evaluation of production processes and economic resources with respect to educational outcomes. This distinction is also a precondition for applying the input-process-output approach.

The terms 'cost efficiency' and 'cost effectiveness' are also often employed in evaluating educational outcomes from an administrative point of view. Another related term from economics is 'productivity', which can refer to the relationship between the efficiency and economy of an action. Examining efficiency in education from the point of view of results produced, we must define what we mean by 'output' and 'input' in the context of evaluation. We may, say, evaluate productivity by taking the ratio of the number of places in education to funds spent as our indicator. Productivity is here the specific relationship between service capacity and money spent. A very different result is obtained by comparing the number of degrees awarded with the teachers' work input that went into preparing them. This shows that the arbitrary and seemingly virtually synonymous use of the terms 'productivity', 'outcomes' and 'effectiveness' in many discussions does not promote the development of educational evaluation models.

Another twist in the discussion of effectiveness and educational outcomes is provided by the varied meanings given to the word 'accountability', especially in American literature. 'Accountability' clearly involves two dimensions: the price paid for the results achieved, and the responsible handling of funds and teaching duties. Discussing definitions of the term, Wagner (1989, 13–17) interprets it first in a very narrow sense primarily emphasizing economic liability, then provides a very broad interpretation which applies quite closely to our discussion of outcomes. As Wagner says: "Presently the term 'results' closely parallels what is generally meant when one speaks of educational 'ends' or 'outcomes' and these terms are frequently used interchangeably in discussions of educational accountability" (1989, 23).

In its broadest sense, accountability refers to the relationship between given resources and results. Wagner's account of the American debate on the subject illustrates the content of the term 'accountability' in relation to 'effectiveness': "One involves concern over rising costs in public services, which are extensive today and each year claim a greater amount of personal income through taxation. Since the mid-seventies, public opinion polls and voter behavior reveal closer scrutiny on the part of taxpayers who are no longer satisfied with knowing the qualifications of teachers, whether schools have the latest facilities and equipment, or even how much a given budget will be, but to an unprecedented extent press for the reduction in school costs, reject budget proposals outright and demand that schools and teachers be held accountable for greater effectiveness, especially when increased funding is requested" (Wagner 1989, 16–17).

Accountability very strongly entails responsibility for funds spent. Good, Biddle & Brophy (1975, 102) stress that accountability connotes, in addition to its economic aspect, a powerful commitment to values, i.e., a 'sense of responsibility'. This is very close to the 'accountability for results' called for in the fashionable management by objectives. As Wagner says (1989, 23): "Of the various forms of accountability proposed for educa-

tion, the concept of 'performance contracting' is often cited as the most effective strategy to assure 'accountability for results'."

Problems with respect to quality have arisen from the fact that quality is always relative, and thus demands clear-cut evaluation criteria and fairly close familiarity with the subject of evaluation. Efforts to establish quality indicators primarily in conjunction with external audits of processes have met with many difficulties, although a number of useful models have been developed. In the field of education as elsewhere, however, process-oriented quality assessments have tended to deteriorate into technocratic quality assurance provided by means of external, often mechanical audits. Even though many highly advanced auditing systems are now available, education professionals who rely on scientific research for the development of learning processes are not convinced of the reliability of such audits.

The connections between financial resources, processes and effectiveness have long been studied, especially by scholars taking an interest in the economics of education. It seems difficult, however, to produce a model that would satisfy both education experts and economists. The crux of the problem seems to be the complexity of the education sector and the difficulties involved in studying its long-term effects. It is hard to demonstrate a causal relationship between today's economic investments and tomorrow's educational outcomes. Economy, efficiency and effectiveness are more likely to be treated as dimensions to be analyzed separately, with an overall assessment pieced together from the individual findings. If there is any chance of determining cause and effect, however, we should of course do so. 'Educational outcomes' as defined by the Board of Education are based on the idea that any successful action is characterized by being simultaneously effective, economical and efficient. Behind this is the idea that education is an activity whose outcome can be influenced by regulating resources and economy. Effectiveness, however, is not increased simply by improvements in economy or process, as it involves many factors related to individuals and functional communities the study of which calls for a process of its own. It is also typical of dimensions that the methodology for evaluating them varies; thus, the methods used to study economy are different from those used in studying effectiveness.

5. What is evaluation?

Evaluation means defining the value of things: analyzing and interpreting the state, benefits or value of something on the basis of facts and views (National Board of Education 1995, 8). Thesaurus (Scriven 1981) defines evaluation as 'the process of determining the merit, value or worth of something or product of that process'.

The evaluator must make the objectives and underlying values of his evaluation clear. He must also explain the criteria that are the basis of the evaluation: he must state when and why certain observed phenomena are good, and when and why they are bad.

The line between research and evaluation has been the object of extensive discussion. The most difficult problem is to make a distinction between evaluation and evaluation research. **The term 'evaluation research' usually refers to research that applies scientific methods to value analysis. Like research in general, evaluation research aims at describing, understanding and explaining the object and causalities of the research.** The validity of evaluation research is assessed by the same criteria as the validity of research in general. Research and validation methods depend on the paradigm in question, and a lively discussion has sprung up concerning different paradigms. Radaelli and Dente (1996), for instance, criticize the tradition of evaluation research which, in line with the Empiricist and Neo-Positivist traditions, tries to produce a foundation of independent knowledge about effectiveness for decision-making. Their criticism is directed at the key premises of evaluation research, i.e., at use of the paradigms in question to produce explanations and alternative operating models for political decisions (Radaelli and Dente 1996, 54–57).

Evaluation in the form it takes when used for political and administrative purposes aims primarily at **acquiring evidence for putting together a complex and thorough description of the process under evaluation, and at formulating an interpretative analysis of the good and bad features of the process**, and its benefits, advantages and disadvantages on the basis of clearly defined values and/or the objectives set for the process. If we exaggerate a little, we might say that the difference between research and evaluation is that research concentrates on explaining the state of, and reasons for, something and evaluation on describing the state of things by looking at the advantages and disadvantages in terms of the objectives set.

Experienced evaluators, particularly in disciplines related to administration, have recently underlined the role of the evaluator as part of the process, as an actor who lays down his own understanding and views on the state of the object under evaluation as a foundation for political, development-related decision-making (for example, Radaelli, Dente and Midgley 1996). Discussion on the status of the evaluator is agitated at the moment, for such approaches as Post-Modernism have brought new stimuli to evaluation research and administrative reform analysis.

Norris writes on evaluation: "It is generally assumed that evaluation is the application of research methods to elucidate a problem of action. Looked at in this way evaluation is not strikingly different from research. For those theorists and practitioners who see evaluation as a separate undertaking to research, there is clearly a problem in providing an adequate account of the difference between them. One reason why it might be important to pursue the distinction between research and evaluation is that our general perceptions of their similarities and differences will influence the way we conceive of the definition, design, conduct and reporting of empirical enquiry in education" (Norris 1990, 97).

In an attempt to provide the basis for an adequate theory of evaluation, the evaluators outlined the following eleven characteristics of inquiry that distinguish evaluation from research:

1. the motivation of the inquirer — research is pursued largely to satisfy curiosity, evaluation is undertaken to contribute to the solution of a problem;

2. the objectives of the search — research and evaluation seek different ends. Research seeks conclusions, evaluation leads to decisions;
3. laws versus description — research is the quest for laws (nomothetic), evaluation merely seeks to describe a particular thing (idiographic);
4. the role of explanation — proper and useful evaluation can be conducted without producing an explanation of why the product or project is good or bad or of how it operates to produce its effects;
5. the autonomy of the inquiry — evaluation is undertaken at the behest of a client, while researchers set their own problems;
6. properties of the phenomena that are assessed — evaluation seeks to assess social utility directly, research may yield evidence of social utility but often only indirectly;
7. universality of the phenomena studied — researchers work with constructs having a currency and scope of application that make the objects of evaluation seem parochial by comparison;
8. salience of the value question — in evaluation value questions are central and usually determine what information is sought;
9. investigative techniques — while there may be legitimate differences between research and evaluation methods, there are far more similarities than differences with regard to techniques and procedures for judging validity;
10. criteria for assessing the activity — the two most important criteria for judging the adequacy of research are internal and external validity, for evaluation they are utility and credibility;
11. disciplinary base — the researcher can afford to pursue inquiry within one discipline and the evaluator cannot (Norris 1990, 98–99).

The Nordic countries share the fairly unanimous view that interpretation and defining the value of the process are central issues. "Evaluation is a definite event that takes place during a set period. A process is studied in order to test its ultimate rationality in a wider context. The aim is often to present arguments for and against change or to test the value of newly adopted methods and arrangements." (Lander 1995, Gothenburg University: national evaluation, a review of three Nordic countries).

Schools: Evaluation includes an in-depth analysis within certain problem areas and aims at understanding and explaining. In the final analysis, it is also connected with the objective of the entire process (Lander 1995, 4).

6. Some methodological problems in evaluation

Evaluation methods are very close to research methods. A large body of data is collected with assessment methods including tests, experiments and interviews. Evaluation calls for a wide range of data based on a number of different viewpoints. Apart from assessment results, we often need dossiers, documents and expert opinions. All these will come together to produce an overall picture of the impacts, which will then be compared with the objectives set.

According to Midgley, qualitative and quantitative material must be used for evaluation as far as this is judged necessary. High-quality results require a combination of various material collection and processing methods. The advantages and disadvantages of the methods must be weighed from the viewpoint of the purpose they are to be used for (Midgley 1996, 71).

When evaluating the effectiveness of education, it is important to have a wide range of test and assessment data as a foundation, but this is not sufficient for evaluation as such. In order to be able to draw conclusions, we usually need content descriptions and analyses applying the methods of qualitative research, and objectives and content analysis to determine what the aim actually is. In order to analyze effectiveness reliably, we also need self-evaluation material and expert interviews to acquire a multifaceted view of the state of the issue under evaluation, and it is necessary to ensure that the time lag in many educational impacts is taken into account. Measurements and assessments carried out on completion of an educational process will therefore usually have to be supplemented after a period of time in order to get a more accurate picture of its effectiveness.

Apart from evaluation of the primary, secondary and tertiary impacts of education, we need evaluation of the impacts observed immediately on completion of an educational process and evaluation of long-term impacts. The conventional division of such assessments into diagnostic, formative and summative is also worth attention in discussions on educational programs. Apart from formative and summative evaluation, prognostic evaluation is of particular importance to program developers, while diagnostic evaluation is a tool for the teacher trainer, a tool that should be more widely applied to individual guidance. The more diagnostic evaluation is used in evaluating individual performance, the sounder the foundation for guiding future teachers. The material derived from various forms of assessment can well be used for more comprehensive evaluation of the effectiveness of teacher training.

Midgley (1996) emphasizes that there is no master method of evaluation to fit every single situation. The best results are obtained by combining various methods of data acquisition and analysis. Evaluation can be understood as intervention creating opportunities for innovation — if not otherwise, at least in the form of learning experiences and a growing data reserve (Midgley 1996, 67–68). The utilization value and sense of evaluation must be appraised by criteria other than those of research.

Since evaluation usually covers an extensive area with a large number of different facets and angles, it also calls for multifaceted materials and a number of evaluators, although there are situations in which even fairly subjective evaluations can be reliable. House has analyzed this issue and comments on the problem of validity of evaluation in education as follows: "What does it mean to say that an evaluation study is 'objective' or 'valid'? Few concepts have been so confused and have caused so much mischief. Many people are reluctant to accept or believe qualitative evaluations simply because they are based on only one person's observations. Observations by one person are considered in and of themselves to be subjective and hence illegitimate for public purposes" (House 1980, 85). In another passage House goes on to say: "The qualitative sense of objectivity is quite different. It refers to the quality of the observation regardless of the

number of people making it. Being objective means that the observation is factual, while being subjective means that the observation is biased in some way. Is it possible for one person's observations to be factual while a number of people's observations are not? Indeed it is. So an observation can be quantitatively subjective (one man's opinion) and also qualitatively objective (actually unbiased and true).

> "In fact, one might contend that the types of biases that affect the opinion of one person are somewhat different from those biases that plague group opinions. For example, an individual may succumb more easily to idiosyncratic viewpoints since he can hold only one perspective. On the other hand, there are social and cultural biases to which a group is more susceptible than is a particular person, e.g., jingoism. The individual's qualitative objectivity can be assessed by his previous track record on such matters and by his current self-interests. In any case, one who subscribes entirely to the quantitative notion of objectivity is not going to be satisfied with approaches like case studies" (House 1980, 86).

7. National Board of Education evaluation model

The National Board of Education has defined effectiveness as a central dimension in the successful achievement of the desired educational outcomes. Successful achievement is defined in the following manner:

> Education has been successful (i.e., it has produced the desired educational outcomes) when it has achieved the objectives set for each organizational form of the educational system, for each institution and for each individual learning process at the national and international level (National Board of Education 1995, 16).

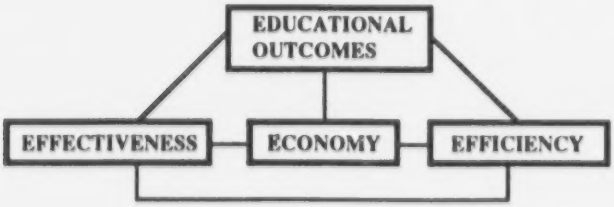

Figure 1. Concept of educational outcomes

Educational outcomes can be evaluated using the dimensions of effectiveness, efficiency and economy. These dimensions are necessary components in an overall picture of 'educational outcomes'. By far the most difficult and the most important dimension in the evaluation of outcomes is effectiveness, which is defined as follows:

> Education is effective when the capabilities it produces advance an individual's mental growth and progress in society, culture and working life. Parallel with effectiveness, the dimensions of efficiency and economy are also defined specifically for the purposes of education.

Efficiency is defined here as follows: "Education is **efficient** when the functioning, flexibility and timing of the education system, educational administration and teaching arrangements are as appropriate as possible" (NBE, 17). In evaluating efficiency, attention is attached to many different aspects of the educational process and its actors.

With economy, we turn our attention to money: "Education is **economical** when the resources of education, in relation to the educational objectives, have been allocated in an optimal way, and the quantity of resources is appropriate with regard to the quantity of educational services produced and the structure and organisation of service production" (NBE, p. 18).

8. Special features in evaluating the effectiveness of teacher training programs

Evaluating the effectiveness of education means analysis of the consequences of an extremely complex process. Evaluation of the effectiveness of teacher training is an even more complex task. Teachers are constantly developing personalities, and their individual properties become refined in a process that, as a result of social development, takes place in a training environment, a framework of examination objectives and with materials regulated through practices confirmed by the official organization of the educational institution and complemented by other process material mediated by the trainers. On the other hand, teacher trainees live their own student life under the influence of various different operating environments which affect their philosophy of life and social consciousness during both training and leisure time.

It is particularly difficult to find 'pure effects' of education and training in the case of student teachers. The cognitive and emotional impacts of education and training can be analyzed with the help of various assessment methods, but the qualifications which a young teacher needs on the job cannot always be evaluated simply on the basis of education. Many other processes which converge to form a particular teacher's work qualifications may be involved.

In terms of teacher training, objectives vary somewhat, depending on the kind of duties teachers are trained to carry out. In professional terms, teacher training gives certain qualifications common to all teachers, and special qualifications depending on subject or target group or both. Evaluating the effectiveness of teacher training requires the perspective of evaluating the primary impacts/effects of the official, confirmed training and education program. However, the more thorough we want to be, the more necessary it becomes to evaluate secondary impacts, too — impacts related to the teacher's societal and social status, and the tertiary impacts that teacher training has on pupils' conception of the world and social status. Quantitative evaluation of training and education is also an important component in evaluating effectiveness.

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Part Two

New challenges to evaluation in teacher education

Learning contents and processes in context: towards coherence in educational outcomes through teacher development

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Abstract

Learning in school needs to be examined in the contexts of the philosophical conceptions of man, the epistemological conceptions of knowledge and learning, and the developments in society and work life. There is a paradigmatic shift from teaching as transmission of knowledge, based on behavioristic theories of learning, towards transformative teaching and learning, based on experiential learning theory. Society developments suggest the need for educating learners for a learning society and responsible citizenship. Coherence in educational outcomes is seen as the degree of match between the planned and experienced curriculum, entailing the need for negotiated curriculum processes. Supporting the teacher's professional development is a significant key for increasing coherence in educational outcomes. This is also a question of promoting a colleagial culture in schools and teacher education institutions.

1. Learning in the context of society developments

In preparing our young learners for life in the changing world, we need to explore and clarify our philosophical conceptions of man and our epistemological conceptions of knowledge and learning. It is also necessary to consider the developments in society, as part of international developments, to find out what kinds of new demands they pose on education. Such demands need to be examined in the context of the national and local goals for education and curriculum design. At the present time of society restructuring, the school cannot survive as an isolated institution, separate from the developments in society.

Due to the recent political and social changes in Europe, new kinds of value conflicts have emerged that require open discussion and cooperation in the changed political context. Increasing efficiency and automation, coupled with the current economic depression, have caused a high proportion of workers to lose their jobs, entailing the risk of

marginalization or even exclusion for a large proportion of people. Other structural changes in society caused by market economy, mobility of people and rapid changes in vocational and professional needs are accompanied by inequity, pressures, anxiety and even emergencies among citizens and families. Learners inevitably bring the tensions in families and society developments with them to school. For a number of learners, such experiences currently contain feelings of stress and insecurity (Niemi and Kohonen 1995; 1996).

The rapid and unforeseen changes in economic life, society structures and production and information technologies have posed new demands on the quality of learning in primary, secondary and tertiary education. High-quality learning is commonly accepted as the aim of education on many European forums. New skills needed in work life include the following key qualifications:

- autonomy, entailing the ability to work independently in changing conditions and face ambiguous situations,
- commitment and taking the initiative,
- continuous learning skills, with the ability to unify the existing skills innovatively and create new knowledge,
- versatile communication skills, and
- team skills: the ability and willingness to work with various people in constructive ways (Ruohotie 1996; Kohonen 1996).

Such capacities are discussed in two recent European documents: the "White Paper on education and training" (1995) by the Commission of the European Communities and "Moving towards a learning society" (Cochinaux and de Woot 1995). Both of the documents emphasize the current need in Europe to move towards a learning society and discuss its educational consequences. With a note of urgency, both recommend profound changes in educational systems based on a shared vision to ensure a valuable degree of coherence. As successful changes cannot be imposed from above it is necessary to involve all the key actors in the educational process (Cochinaux and de Woot 1995, 17; Niemi and Kohonen 1996).

As part of this trend, the year 1996 is declared the "European year of lifelong learning," with an action plan for the European Community. The main objectives of the plan include the following:

1. encouraging the acquisition of new knowledge,
2. bringing the school and business sectors closer together,
3. combating exclusion (or marginalization) and developing a sense of belonging,
4. developing proficiency in three European languages, and
5. treating capital investment and investment in training on an equal basis.

Accordingly, education and training will be most important for the individual's self-awareness, belonging, advancement and self-fulfilment. Education is in a key position

for facilitating people to take charge of their future and their personal development (The White Paper 1995; Niemi and Kohonen 1996; Kohonen 1996).

The school community is also a mirror of society in itself, giving learners an experiential model of society and a workplace. It has a significant function of socializing young learners to the culture of the school, as it is developed and perceived by the participants in the school community. School culture indicates the way things are done in school and prepares the learners for life in adult society. School culture determines largely how the demands for innovation are perceived, discussed and tackled (or ignored) in school. The school therefore needs to take a firm stance on such fundamental social and ethical goals as justice, human dignity and respect for human rights. These goals entail teachers acknowledging the ethical nature of the profession in the contexts of classroom processes, school community and the surrounding society (Kohonen and Leppilampi 1994; Niemi and Kohonen 1995; 1996; Kohonen 1996).

It is consequently necessary for educators to analyze the context of school learning in society, informed by the theoretical developments in educational, psychological and philosophical research. The analysis should include the developments at least in the following areas (Kohonen 1994; Kohonen and Leppilampi 1994; Niemi and Kohonen 1995; 1996):

1. **Educational philosophy**: conception of man; values education
2. **Society trends**: current and future developments in society
3. **Educational goals and curriculum guidelines**: national and local goals for schooling
4. **Conceptions of knowledge and learning**: how to manage and evaluate learning

Such factors need to be explored in school for the design of the site-based curriculum. The quality of the educational outcomes needs to be understood in a broad sense, as the quality of the learning environment and how the school supports the all-round personality development of the learner. Learner development needs to be examined in terms of both knowledge and skills as well as personal and social growth. This suggests a holistic approach to curriculum, learning and the educational outcomes (Kohonen 1994; Niemi and Kohonen 1995; Kohonen 1996).

2. Coherence as a holistic approach to curriculum and learning

2.1 Coherence as the degree of match between the planned and experienced curriculum.

The concept of "curriculum" is generally defined as the organized intentions, plans and programs for what the learners are expected to learn. The official curriculum refers to the

public descriptions of learning policies, goals, contents and evaluation. In an experiential sense, however, the notion of "curriculum" also needs to be seen as the

(1) learners' experiences under the school's guidance, and

(2) what they make out of those experiences, i.e., what they gain from their time in school.

Education ought to help learners to develop a broader and deeper understanding of themselves and the world, to make sense of their experiences, and to come to terms with significant ideas of life (e.g., what it means to be an educated person) as part of their growth processes. Coherence, then, is a matter of how the learner makes some unified and integrated sense of learning experiences in the socially constructed institutional setting (Beane 1995, 170).

The experiences are the result of the planned curriculum. Aiming at coherence thus involves a two-way transaction, as pointed out by James Beane (1995, 171): the individual making sense of what the school offers and the school offering something that can be made sense of and in a way that making sense is possible. Taken this way, coherence is a dialectic, a discourse, *a conversation between young people and the planned curriculum and whoever plans it.*

Curriculum needs to be seen both as the content and as the process. It is a planned set of intentions aimed at supporting learners in their search for meaning. Coherence thus entails an effort towards a consciously designed harmonious relationship between the learning experiences and the desired outcomes of learning. It can be seen as the degree of consistency between what is said in public documents, what is being done in actual practice in school, in real contexts of learning, and how it is experienced by the learners.

In the holistic approach, learning can be seen as learner development in three interrelated areas of competence (Kohonen 1992a,b; 1994; Kohonen and Leppilampi 1994; Kohonen 1996):

1. **personal competence**: self-concept, self-esteem and self-direction, involving a willingness and skills for collaboration
2. **process competence**: process management, involving the necessary skills for increasingly self-regulated learning and self-assessment
3. **task competence**: knowledge of the subject-matter being studied, involving the skills to identify and design learning tasks to promote access to learning

Learning does not take place in a vacuum. It is both an individual and a social process involving interaction between the learners in the learning environments organized by the teacher. The way the teacher organizes the environment depends on his or her professional thinking, competence and commitment. Enhancing the learner's holistic competence in the above areas of competence is thus closely connected with the teacher's pedagogical choices in the given cultural context of the school. Culture can be seen as the lived, shared experience of the persons participating in school life (Beane 1995, 171). This interdependence between the learner's learning outcomes, the teacher's pedagogical competence and the culture of the school is summarized in Figure 1.

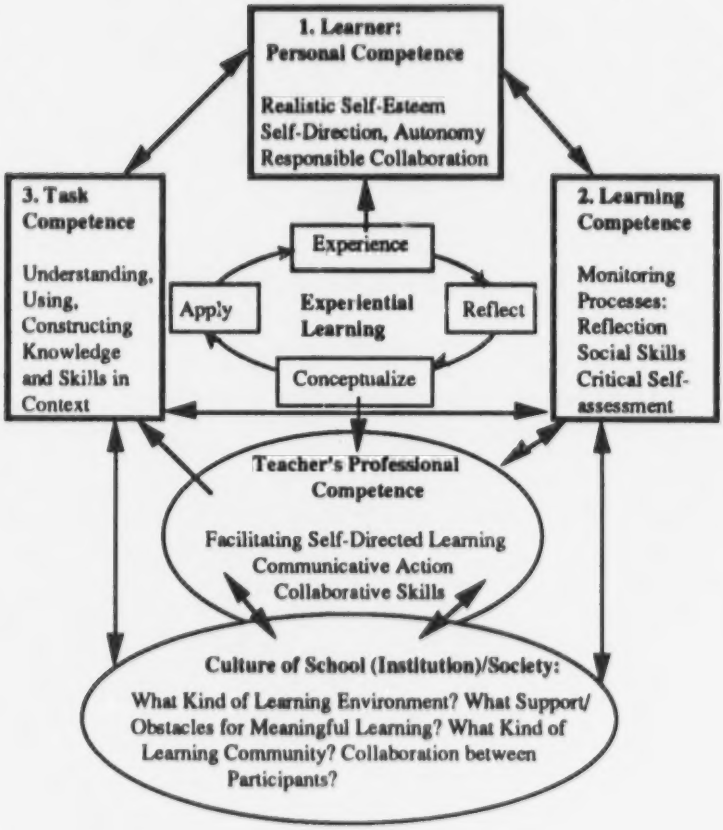

Figure 1. Learning and teaching in school context

In the light of the European society developments outlined above, the following vision might be suggested for life-long learning: "*Competent learners and responsible citizens for intercultural cooperation.*" If this vision is acceptable, we have to ask what kinds of goals it might imply for curriculum design (Kohonen 1992a; Kohonen 1996). Developing the learner's competence on all three of the areas is seen as a way of facilitating the learner to be a more competent person. Instructional decisions can, in fact, be "back-chained" from the vision so as to support the development of the learner's competence in the desirable direction by a conscious pedagogical design and continuous evaluation.

When designing the learning tasks, the teacher consequently needs to direct attention both to the (1) **content**, i.e., what kinds of tasks and materials the learner works with, and to the (2) learning **process**: how he is guided to work on the task. Instructional decisions

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can be made so as to combine the subject-matter aims and the educational aims to be focused in the learning process.

In the pedagogical design, the teacher may find the following questions helpful:

- **aims and tasks**: Who sets the aims, chooses the tasks and decides on the contents and modes of working on them? How relevant and interesting tasks do learners have?
- **monitoring**: To what extent can learners design their own tasks and suggest ways of evaluating their performance?
- **involvement**: How actively are learners engaged in the tasks? Do the tasks pose intellectual challenges? Do they involve risk-taking? Do tasks invite reframing of problems? Do they involve unanticipated, new solutions?
- **cooperation**: To what extent do learners work together to solve tasks, setting objectives and planning the work together?
- **reflection**: In what ways are they guided to evaluate the outcomes and the process together?
- **awareness**: Do tasks promote an awareness of the learning processes? Do they give opportunities for identifying strategic options and trying them out?
- **understanding**: To what extent do learning tasks promote a cumulative understanding and making sense of the subject matter?
- **continuity**: To what extent do the tasks promote continuity of the learning experience? Do they make use of previous learning as a tool of new learnings? (Kohonen 1992b; 1996).

The questions invite the teacher to think and find out how learners construct personal meanings and organize them into personally coherent schemes. Aiming at coherence between the planned and the experienced curriculum means, then, that the voices of the learners themselves need to be listened to and heard. To proceed in this direction, learners need to be involved in the process of planning their curriculum, at least at some level that is significant and possible for them. As James Beane (1995, 174) asks, "How can we expect to have a coherent curriculum without finding out what questions and concerns young people have?"

The questions raise the concept of negotiated curriculum by way of engaging the learners actively in the process of enacting the curriculum. The process of negotiating means bringing together the experiences and the intentions of the participants into a shared learning intent that is carried out. The outcomes of the action are reflected and evaluated together. The process includes the following stages (Boomer 1992, 10–11):

1. joint planning and negotiation,
2. setting the aims (teacher's and learner's intentions),
3. collaborative exploration (shared intent under the constraints),
4. achievements (core learning and products), and
5. evaluation (shared reflection).

As Garth Boomer (1992, 14) points out, negotiating the curriculum means deliberately inviting the learners to make a personal contribution to their educational program, so that they have a "real investment both in the learning journey and in the outcomes. Negotiation also means making explicit, and then confronting, the constraints of the learning context and the non-negotiable requirements that apply."

Teachers thus need to be open to learner diversity, their experiences and the concerns that they bring to their school education. In doing so they must face the fact that young learners' concerns and aspirations may be different from their own. Moving towards coherence means listening to and hearing what meanings learners are trying to construct and what they believe they could do. Learners can be facilitated to acquire and expand their learning competence as a conscious pedagogical design. New ways of authentic assessment (such as the learner portfolios) are necessary in order to integrate assessment and instruction.

2.2 Coherence as a paradigm shift towards transformative learning.

The current paradigmatic shift in education, evident in the above discussion of negotiating the curriculum, entails a clear movement away from the behavioristic model of teaching as transmission of knowledge towards an experiential model whereby teaching is seen as transformation of knowledge, based on socio-constructivist views of learning.

The shift can be analyzed by juxtaposing the polar ends of some pedagogically relevant dimensions (cf. Miller 1988; Guba and Lincoln 1989; Johnson et al. 1991; Kohonen 1992b; 1994; Järvinen et al. 1995). However, doing so does not imply criticism of either of the paradigms compared: it is not justifiable to evaluate one paradigm on the basis of the premises of another paradigm. Any pedagogical decisions have to be evaluated within the relevant theoretical framework and the current socio-cultural and educational context and traditions. In many settings, deciding on the broad goals of instruction is obviously a matter of educational policy-making at the level of national curriculum guidelines and district directions which teachers are expected to implement. If the teacher makes a conscious decision to move towards the experiential model, this means shifting more emphasis towards the right-hand end on the following dimensions of Table 1.

The comparison can suggest options for the educator which may help him or her to clarify his or her own stance and critically examine the extent to which his or her choices are consistent and coherent within the broad paradigmatic position that he or she has adopted. The range of options is obviously also a question of political priorities and traditions at the national level in society. Evaluation practices also need to be considered as part of the paradigm, to see how consistent they are with the instructional goals, and what purposes and functions they serve within the curriculum (Kohonen 1992b; 1994; Järvinen et al. 1995).

3. Coherence as new ways of assessment: authentic assessment

It is wellknown that anticipation of evaluation procedures has a backwash effect on learning, both in terms of the contents (what is learned) and processes of learning (how knowledge is organized in memory; how student learning is guided).

Table 1. Comparison of two learning paradigms

Assumptions in instruction: some dimensions	*Traditional model: teaching as transmission*	*Experiential model: transformative learning*
1. Image of man; locus of control	Other-direction; external locus of control	Self-direction; internal locus of control
2. Concept of learning	Behavioristic	Constructivistic and humanistic
3. Power relation and teacher's role; view of professionalism instruction);	Emphasis on teahcer's authority: imparting knowledge (mainly frontal collaborative, interactive professionalism as individual autonomy	Shared partnership, teacher as a "learner": facilitating learning (largely in small groups); professionalism
4. Learner's role	Relatively passive recipient of informationa; emphasis on individual work	Emphasis on active learner participation, both alone and in cooperative teams
5. View of knowledge	Transmission of knowledge: knowledge presented as "certain"; application, problemsolving	Transformation of knowledge: construction of personal knowledge in process; identification of problems
6. View of curriculum	Static: hierarchical grading of subject matter, predefined contents	Dynamic; looser organization of subject matter, including open parts and integration
7. Learning experiences	Knowledge of facts, concepts and skills; focus on content and product	Emphasis on process: learning skills, self-inquiry, social and communication skills
8. Control of process	Teacher in charge; teacher-structured learning	Learner in charge; self-organized learning
9. Motivation	Mainly extrinsic	Mainly intrinsic
10. Evaluation	Product-oriented; achievement testing; criterion-referencing (and norm-referencing)	Process-oriented; portfolio assessment; reflection of process; self-assessment; criterion-referencing

Evaluation can thus affect both the quality and quantity of learning outcomes. Evaluation can be seen as a mirror of the learning goals, measuring the extent to which they are achieved. It is therefore necessary to ask what we are aiming at in learning because this also indicates what is to be evaluated and how it is done.

Evaluation thus needs to be examined in terms of product and process assessment. Process evaluation is an integral part of the learning process, providing information to

- the **teacher** about the progress of individual learners (in terms of competence development: learning tasks, personal growth, learning skills), informing the educational decisions and helping the teacher to plan instructional interventions

- the **learner** about how he is progressing (in terms of both content and process), helping him to develop his learning skills.

Product evaluation, on the other hand, refers to the summative testing, aimed at gauging the learner's knowledge and skills in relevant tasks in terms of criterion-referenced descriptions of levels of attainment (for foreign language learning, cf. Carroll and West 1989; North (ed.) 1992; North 1993). The tests can be administered by the teacher as classroom tests, by educational authorities for purposes of evaluating the curriculum, or for placement or selection purposes. Obviously, both kinds of evaluation are needed for different purposes in the total nation-wide educational setting.

Together the two kinds of evaluation constitute the twin goals of learner-centered curricula: (1) evaluating the development of the learner's competences (knowledge, subject-matter content, skills), and (2) developing the learner's critical awareness as an active and responsible agent within the learning process. Evaluation needs to be seen increasingly as a way of helping learners to learn and take charge of the process more independently. Consequently, more professional thinking needs to be devoted to process evaluation since it can have the powerful effect of shaping the ongoing learning process (cf. Kohonen 1992a,b).

As a reaction to the large-scale, standardized testing focusing on learner selection and placement, more emphasis has been shifted recently to new, more flexible and informative ways of evaluation (cf. Smith 1986). The search for alternatives to the standardized tests has suggested the concept of "alternative" assessment. Other terms of the new approaches include such labels as performance assessment, portfolio assessment, instructional assessment and authentic assessment. While the terms suggest different emphases, they all imply a movement that aims at integrating learning, teaching and evaluation. The concept of **authentic assessment** is probably best because it emphasizes the real-life meaningfulness of evaluation and the commitment to measure that which we value in education (Hart 1994, 9).

Essential to the different forms of authentic assessment is that they

1. focus on important curriculum goals,
2. aim at promoting individual competence, and
3. are carried out as an integral part of instruction.

The authentic assessment movement is characterized by the following goals and requirements for developing assessment (cf. Herman et al. 1992; Armstrong 1994, 117–18; Wolf et al. 1991; Wiggins 1993; 1994; Cohen 1994; Darling-Hammond 1994; Darling-Hammond et al. 1995):

1. Assessment is seen as an integral part of the new "thinking" curriculum goals: complex reasoning using ambiguous, open-ended tasks; posing questions, making judgements and considering evidence; communication skills: argue, debate, prove.
2. Assessment poses real-life, interdisciplinary challenges by using educationally worthwhile tasks.

3. Assessment provides multiple sources of data and the possibility of several perspectives, thus giving more information about learner progress.
4. Assessment treats each learner as a unique person and recognizes and values multiple intelligences (Gardner 1993), varied learning styles and learner diversity, thus helping learners "to use their minds well," as Wolf et al. (1991) point out.
5. Assessment is ongoing, emphasizes learner strengths and requires collaboration between learners, thus helping to make classrooms into learning communities.
6. Assessment is generally known to learners in advance, allowing choices and preparation (e.g. the showcase portfolio prepared by learners).
7. Assessment encourages teachers to develop meaningful curricula and provides them useful information for guiding student learning.
8. Assessment appeals to intrinsic rather an extrinsic learning motivation and encourages responsible self-regulated learning.

Self-assessment is an important strategy in authentic assessment. To promote this goal, the teacher can use the following questions as a check list:

- **self-esteem**: How does the learner feel about himself as a person? To what extent does he feel self-reliant and competent?
- **role**: How does he see his role as a learner? To what extent does he feel in charge of his own learning?
- **monitoring**: To what extent can he monitor his learning, both alone and in small learning teams?
- **self-regulation**: To what extent can he organize his knowledge of the subject matter and learning?

These questions suggest the importance of a reflective process evaluation by the learner himself. Such evaluation can be carried out well in cooperative learning groups in which learners are asked to reflect on what they have learned, how they have learned, how they have worked together, and how they might improve their work. By learning to capture salient aspects of their own learning, learners can become more informed and thoughtful learners. Reflective self-assessment is thus seen as a way to continue improving as a learner and a group member.

The learner can organize his achievements, plans, reflections, observations and work samples in a **portfolio**. A portfolio is a purposeful collection of learner work that exhibits his efforts, progress and achievements (cf. Paulson et al. 1991; Kohonen 1992b; 1994; Herman & Winters 1994; Wiggins 1993; 1994; Wolf et al. 1991). In the course of learning, the portfolio becomes a kind of autobiography of the learner containing the following kinds of documentation

- work samples: what the learner has done
- learner reflections on his learning processes
- self-assessment of the results of his efforts
- learner achievements in terms of criterion-based descriptions of learning outcomes.

The advantages of portfolio assessment go far beyond evaluating learner performance by product-oriented tests. As part of the goals of authentic assessment discussed above, portfolio assessment can improve the learning atmosphere by introducing a shared management of learning and increasing mutual trust and partnership among learners and teachers. It provides the teacher an authentic, detailed documentation of the learner's progress. This increases the teacher's understanding of the learner's meanings as they can be inferred from the portfolio documentation (Kohonen 1992b; 1994; 1996).

Authentic assessment has some promising advantages for further developments, but it also has obvious problems. While learning documentation provides rich data about learning, it is labor-intensive for the teacher to analyze carefully for feedback to the learner. The question of time and resources for the necessary learner guidance is a problem in classes with large numbers of learners. Besides, learning to use the new practices with confidence is a question of professional growth for the teacher, and the learners also need time and explicit instruction and support. This means thus moving towards a new culture of evaluation. Using the data for grading purposes is similarly time-consuming and open to problems of consistency and inter-rater reliability.

There are no easy solutions to these questions; they depend heavily on the teacher's professional competence, confidence, commitment and support. Nonetheless, it is imperative to ask what it is that we want learners to learn in school and consequently what needs to be evaluated, rather than asking what is possible to score cleanly and economically. As Wolf et al. (1991, 51) point out, assessment is inevitably involved with questions of what is of value in educational outcomes, rather than simple correctness.

Valuable goals are worth evaluating. This is obviously a question of the validity and credibility of evaluation. An important validity construct has been suggested recently by Robert Glaser (1990): **consequential validity**. The concept describes the extent to which an assessment tool and the ways in which it is used can produce positive consequences for the teaching and learning process and the learners. Linda Darling-Hammond (1994, 11) makes an important point when she argues that the emerging validity standard places a burden on assessment developers and users to demonstrate that what they are doing works to the benefit of those who are assessed and to the society at large. To be credible and compatible with the goals, assessment needs to support challenging and authentic forms of teaching and learning. This is, then, once more a matter of transparency and coherence between the educational goals and assessment practices (cf. North (ed.) 1992; Kohonen 1996).

5. Coherence through the teacher's professional growth

The changes discussed above have posed new demands on the quality of learning at all levels of education. Teachers have an important role in promoting high-quality learning and learning society. This entails that teachers also see themselves as continuous learners in their profession. They should actively explore new ways of facilitating their students'

development towards a learning society (Niemi and Kohonen 1995; 1996; Kohonen 1996).

In modern learning psychology, the central concepts such as authentic learning, self-directed learning, self-regulated learning, independent learning, autonomous learning, problem-based learning and active learning are used to refer to the same broad purpose: emphasizing the learner's active role in the learning process in different ways. Another important element is the social nature of learning, indicated by concepts such as cooperative learning, collaborative problem-solving, sharing, promotive interaction, and reflection. These concepts refer to the importance of learning the necessary metacognitive tools in order to manage and monitor the processes of learning. Such elements are seen necessary for achieving better learning outcomes (Niemi and Kohonen 1996).

There has been, however, a persistent discrepancy between the new meta-knowledge of teaching and learning and the practices of teaching in schools (Cuban 1990). Teachers can pursue their old practices, regardless of the structural changes in school. What matters is thus the quality of learning rather than mere administrative and management structures. The discrepancy is due to many contextual factors such as the resources, school traditions and administration, curricula, teacher education, and the teachers' own concepts, beliefs and assumptions of teaching and learning. It is obvious that the dilemma cannot be attributed to any one factor alone; the reasons are complex and interconnected. Ultimately, however, it is the teacher who determines the extent to which the new methods of active learning are used in his or her own class (Niemi and Kohonen 1996; Elmore 1995; Kohonen and Kaikkonen 1996).

Teachers are guided in their pedagogical choices by their images, beliefs, assumptions and perceptions of what it means to be a teacher. Such images may be based on dated views of learning. In the rich literature on learning to teach, a recurrent finding is that the student teacher's prior experiences of being a pupil in school and his pre-existing beliefs and images about teachers, learners and learning play a central role in filtering the content of the teacher education programs. The beliefs and images have proved very stable and inflexible. They are hardly touched by the well-intentioned course work in initial teacher education about learning and teaching (e.g. Kagan 1992; Kohonen and Ojanen 1993; Kohonen 1994; Ruohotie 1994; Ruohotie and Grimmett (eds.) 1996; Järvinen and Kohonen 1995).

To change their images (where appropriate) teachers need to have plenty of opportunities for extended interaction with learners and each other in authentic contexts. What has been traditionally missing in the teacher's work are commitment to analyzing the experiences in reflective groups and developing systematic ways of learning from experience. Teachers need opportunities and tools to reflect on their prior (and current) beliefs, getting in touch with their images of themselves as educators.

Teachers' learning processes are individual, but they depend on the educational, social, political and cultural contexts in school and society. The traditions of schools, institutional developments in school communities, teacher education culture and school administration create opportunities (and also constraints and obstacles) for the teacher's professional growth and the role of active learning in the teacher's work. This important

interrelationship is summarized by David Hargreaves (1994, 435–436) as follows: "There is no teacher development without institutional development ... and there is little significant school development without teacher development" (Niemi and Kohonen 1996).

School improvement is thus a question of investing in teacher development. To face the huge challenges posed by the paradigm shift and the restructuring processes in society discussed above, teachers need to work both alone and together to develop a new culture of shared learning in schools. How this can be supported depends on professional growth and the working conditions and resources that can facilitate or impede the processes in school (Niemi and Kohonen 1995; Kohonen 1994; Kohonen and Niemi 1996; Kohonen and Kaikkonen 1996; Kohonen 1996).

6. Promoting teacher development to increase pedagogical coherence

To increase pedagogical coherence in instruction, teacher development needs to be promoted at all stages of teacher education: in initial teacher education, in induction education supporting young teachers' professional socialization, in inservice teacher education, and in the mentoring education of teacher educators. What is needed is, in fact, a new culture of teacher education whereby teacher educators also see themselves as growing professionals.

6.1 Research on initial teacher education

In the light of the challenges of the paradigm shift in educational research and the society developments discussed above, teachers are facing the huge task of finding ways to change their personal meanings and understanding of their work, where appropriate. The change needs to come from within; it cannot be enforced from outside, and attempting to do so would be ethically questionable. The mismatch between the "old" images and the new demands for professional competence seems to go far to account for the discrepancy between the teacher's educational practices in classes and the new meta-knowledge of learning and teaching. As noted above, teachers easily pursue their familiar and safe practices, regardless of the changed context of work. The result is lack of coherence between the new curricular guidelines, the site-based curriculum goals and what actually happens in schools and classes.

Dona Kagan (1992, 142) makes an important observation as she points out that preservice students enter programs of teacher education with personal beliefs about teaching, images of good teachers, images of self as teacher, and memories of themselves as pupils in classrooms. These personal beliefs and images generally remain unchanged by a preservice program and follow candidates into classroom practica and student teaching.

The stability of such images and beliefs also explains why the liberal effects of teacher education are easily washed out by the traditional school experience of beginning teachers: there is little to wash out if nothing has changed at the deeper level of personal meanings (Kohonen and Ojanen 1993; Kohonen 1994; Niemi and Kohonen 1995; Järvinen and Kohonen 1995).

The theoretical work in the initial teacher education needs to be systematically connected with classroom practice, helping teachers to see where they are currently in their classroom practices. Change processes can only begin from where one is professionally at the given moment. Further, teachers need to share their ideas, insights and problems with each other. For growth to occur, the images need to be clarified and redefined. Teachers need to work towards increased reflectivity by considering current evidence, searching for alternatives, viewing familiar classroom situations from multiple perspectives, and judging the adequacy of their decisions using research-based evidence (Kagan 1992; Kohonen and Ojanen 1993; Kohonen 1994; Niemi and Kohonen 1995; Järvinen et al. 1995).

The purpose of the reflective work is to integrate prior beliefs and images, new theoretical knowledge and classroom experience into personalized understandings. Experiencing cognitive dissonance and uncertainty is often necessary for the reconstruction of the existing beliefs. Teacher education ought to provide built-in opportunities for challenging current images through personal reflection and intensive interaction, in a safe and supportive environment. A supporting environment is necessary for the intensive work on their own self-understanding and modelling by reflective teacher educators and researchers. The culture of teacher education needs to be examined critically.

This process of reflective self-assessment is what Guba and Lincoln (1989) call the fourth-generation assessment. Its purpose is to help learners to become alert to new possibilities by challenging their prevailing constructions. New understandings are created in the interactive process by sensitizing existing constructions, analyzing them, soliciting conflicting perspectives and resolving the conflicts into new, better informed constructions. Research is under way to explore these issues further in initial teacher education and in the professional socialization of young teachers (Kohonen and Ojanen 1993; Kohonen 1994; Niemi and Kohonen 1995; Järvinen and Kohonen 1995).

6.2 The OK school development project

In addition to working on initial teacher education, research needs to be conducted on the change processes in authentic school environments. University researchers and experienced teachers in schools need to develop new partnerships which are based on an equal role of the participants working closely together to improve present practices and develop new ones, based on explicit research and development work.

The Department of Teacher Education at Tampere University has launched the "OK Project" to be conducted in 1994–98 with six schools in the Pirkanmaa region. The participating schools are Amuri Lower Comprehensive School, Nokia Upper Secondary

School, Pyynikki Upper Comprehensive School, The Swedish Comprehensive School in Tampere, the Tampere University Professional Practice School and Tesoma Upper Comprehensive School, including about 30 teachers who are committed to the project. The project is coordinated by Pauli Kaikkonen and Viljo Kohonen, who function as consultants and action-researchers and participate in the work as equal partners with the teachers. The shared planning is carried out by a coordinating group with the researchers and one teacher from each school (Kaikkonen, in this volume; Kaikkonen and Kohonen 1996; Kohonen and Kaikkonen 1996).

At the moment, the main research questions of the project are formulated as follows:

1. How does the culture of the individual schools participating in the project change, and how does curriculum thinking in these schools develop as a result of the in-service teacher education offered by the project? How meaningful do teachers find their inservice education? How can it be developed as a result of joint planning and evaluation?
2. How does the pedagogical thinking of the participating teachers change during the project, and what new forms of activity do they develop? How does the culture of the school support the teacher's professional growth? What kinds of learning environments do the teachers create in their classes?
3. How do the changes in the teachers' pedagogical thinking impinge on the development of the learners' thinking, attitudes and competences? How does the learner's experienced curriculum develop during the project? What kinds of authentic forms of assessment, particularly self-assessment, do the teachers develop together with the researchers for gauging the educational results? How do the learners' learning outcomes develop and change in the course of the experiment?

The project thus aims at exploring the educational outcomes at the levels of the changes in the teachers' thinking and pedagogical choices, the culture in the participating schools, and the development of the learners' competences. A wide range of empirical data is collected during the progress of the project, which is analyzed through qualitative methods and reported in subsequent publications (Kaikkonen, in this volume; Kaikkonen and Kohonen 1996; Kohonen and Kaikkonen 1996; Kaikkonen 1996).

7. Discussion

Coherence in school learning can be illustrated by the metaphor of putting together jigsaw puzzle pieces. Anyone who has tried completing the puzzle knows how important it is to have a picture of the whole puzzle available; otherwise fitting in the pieces can become an exercise in frustration. None of the pieces is important alone, but together they constitute the picture, and the completion process is meaningful intellectual work. When doing the puzzle, it is a good idea to form larger chunks of the pieces by attaching new pieces to partly completed sections. Looking at the big picture helps to see where the different pieces might fit in (Beane 1995).

Another metaphor might be that of orienteering. We need a map to guide our physical exercise, indicating where we must go — and we must also be able to read and interpret

the map with understanding. If there is a mismatch between the map and the terrain (e.g., due to a dated map) we must be able to recover from the information gap and trust our interpretation of the terrain. We need to be able to make sensible choices of alternative routes and courses of action; and we must have persistence and physical fitness to complete the task.

Learners also need the big picture, or a map, of their learning tasks to guide the work of putting together the pieces in the different disciplines and across the curriculum. This is a question of negotiating the curriculum contents and processes with the learners and helping them to grasp the educational goals for themselves. It is also helpful for them to visualize where they stand in relation to the goals, and what progress they make in the goal direction. They need to see optional courses of action and make personal choices, taking responsibility for the decisions. Seeing options, making choices, reflecting on the consequences and making new action plans are essential elements for the development of autonomous learning.

Teachers also need to see themselves as learners of their profession. Various applications of action research with groups of teachers working together on pedagogical projects, planning common activities together and developing curriculum are all clear indications of the school being in a process of restructuring. For real changes to take place, however, it is necessary to support the changes of the norms, knowledge, understanding and skills at the individual level in the first place. Teachers might first learn to work differently in their classes and develop shared expectations and beliefs about what good learning is for them and their learners.

As James Beane (1995, 175) points out, the crucial issues in coherence are not just psychological or organizational. Coherence is not a simple matter of naming and exercising a theory of learning or restructuring the school for operational efficiency. The real issues are philosophical: What is it that we want our learners to learn in school? What is our vision of the desirable educational outcomes? What is the "glue" that holds the pieces together, and how is it negotiated among the participants? In other words, what are the values that the school seeks to promote? In what ways are they present and visible in the moral life in school? Beane notes that such a discourse is necessary in school for coherence to develop through shared meanings.

The discussion emphasizes the importance of the teacher's competence and commitment to the broad outcomes of student learning in school. As Jackson et al. (1994, xii–xvi) point out, schools do much more than pass along knowledge. They also affect the way learning is valued and sought after and thus lay the foundations of life-long habits of thought and action. Schools have the potential both for having a positive moral influence on those they serve, and the potential for doing moral harm. It is possible that the unintentional outcomes of schooling, the ones that emerge in daily classroom life and are seldom planned in advance, are of greater moral significance than those that are intended and consciously sought. This is because many of the unintended influences are in operation all or most of the time, whereas the intended ones are more episodic and self-contained (Jackson et al. 1994, 44). Consequently, the teacher's awareness of the complexity

of moral life in school, and his commitment in promoting it, are crucial for the quality of learning.

The teacher designs the learning tasks and creates learning environments within the constraints of the larger context provided by school culture and the prevailing culture in society. Teachers need to develop a thorough understanding of what they are doing and why they do it. This point was made emphatically by Lawrence Stenhouse, an early pioneer of the teacher as a researcher movement, in his quote "It is teachers who, in the end, will change the world of school by understanding it" (quoted from Rudduck and Hopkins 1985, the memorial inscription to Lawrence Stenhouse). Teacher commitment and responsible decision-making are essential for innovations to take place in school.

Linda Darling-Hammond (1996) notes that there is a "quiet revolution" in rethinking about teacher development. Reforms need to focus on teachers as learners and enhance their professional autonomy, in collaboration with other teachers. She points out that regulations as such cannot transform schools; transformation can be done only by the teacher, together with parents and administrators. Teachers need to focus more on "doing the right things" in school, rather than "doing things right." Increasing coherence in educational outcomes is consequently a question of the teacher's professional growth. How this can be conceptualized and supported is an important agenda for research.

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Teachers' professional morality: How teacher education prepares teachers to identify and solve moral dilemmas at school

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Abstract

This article discusses the importance of professional morality in teachers' everyday work at school. Different aspects of morality are explored in the framework of the ethos model identified by Fritz Oser. The article argues for practicable strategies in dealing with moral and interpersonal aspects of problem-solving by adapting the discourse position. The aim is to give teachers better strategies for making important decisions which affect the lives of their students. This article presents the theoretical framework for our empirical study which explores different kinds of moral dilemmas teachers identify in their everyday work in the school. We also discuss some conceivable ways to assess the effectiveness of teachers' problem-solving strategies in those moral dilemmas they have identified. The article advocates an increase in ethical discourse for both pre- and in-service teachers.

Key words: teachers' professional morality, ethics teaching, ethical discourse, moral education

1. Introduction

In recent decades one has witnessed a growing interest in the moral domain of teaching among educational researchers and teacher educators. This trend of emphasizing the ethical nature of teaching and teacher profession has been reflected in the texts of Tom (1984) and Strike and Soltis (1985). In the 1990's the moral dimensions of teaching have been further conceptualized (Goodlad et al. 1990, Oser 1994). Fritz Oser has justified the need for moral education for teachers and students by arguing that "moral education needs to be the beginning and the end of education because it deals with the possibility of stimulating an autonomous and self-reliant person" (Oser 1986, 919).

The goal of becoming an autonomous person can be seen as one of the main characteristics of the new view of learning. Autonomy has also been identified as one of the ba-

sic components of new professionalism for teachers (Niemi & Kohonen 1995, 75). Autonomy in teaching means more power and more room to make important decisions concerning students and their learning. This increased autonomy in the teaching profession might also create new situations and new professional dilemmas for teachers to solve. Do the teachers have enough capacity to take the new responsibilities that come with the increased autonomy in their work?

In teacher education, the students have traditionally acquired mastery of the subject matter they teach and the capability to perform the didactic tasks of a teacher. According to Niemi's study, the Finnish teachers who graduated in the late 1980's evaluated themselves as being competent in these areas. On the other hand, they had not acquired very good skills for cooperation with parents or for other situations that involve interaction (Niemi 1995). In a recent American survey, teachers reported that they are ill prepared for dealing with ethical dilemmas in their classroom. The major conflicts experienced in teaching were judged to be ethical in nature by 70 percent of teachers. The majority of the teachers surveyed did not see clear ways to resolve the conflicts they had faced (Lyons 1990).

The emphases on teacher autonomy in the new professionalism and the findings of the recent surveys indicate that we need to re-evaluate the status and the strategies of moral education in teacher education. Evidently teachers need more support in decision making which involves interpersonal and moral aspects. In this article we argue for practicable strategies of dealing with the moral and interpersonal aspects of problem solving by adapting the discourse position advocated by Oser (1991). Our aim is to give teachers better strategies for making those important decisions which affect the lives of their students. This article presents the theoretical framework for our empirical study which explores different kinds of moral dilemmas teachers identify in their everyday work in the school. We also discuss some conceivable ways to assess the effectiveness of teachers' problem-solving strategies in those moral dilemmas they have identified.

2. Teachers' professional morality

2.1 The teachers' ethos model

Oser (1991) has proposed a distinction among three types of morality: normative, situational and professional. Professional morality is connected to nonmoral, functional, professional acting. As long as everything goes without any conflicts, the teachers do not usually need to consider the ethical standards of their acts. It is only in those situations when the normal routines of instruction are interrupted that teachers need to consider the principles for solving the existing dilemma. The types of principle teachers refer to in these conflicts defines their professional responsibility, which manifests itself in professional acts.

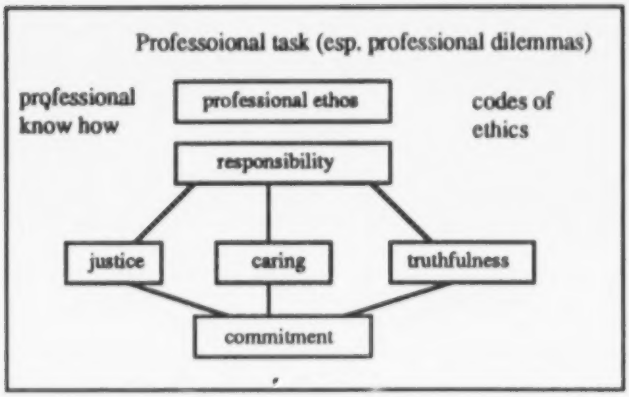

Figure 1. Dimensions of the teachers' ethos model (Oser 1991, 202)

Teachers' professional morality can also be called their professional ethos. Oser has outlined a model for studying teachers' professional ethos (Oser 1991, 202). He argues that moral conflicts in educational settings arise when three types of moral claims cannot be met at the same time. These claims of justice, care and truthfulness are critical issues in teachers' professional decision making. Professional morality emerges in strategies of coordinating these moral dimensions in the search for an adequate solution to a problem. The differences between individuals' professional morality can be seen as differences of teachers' strategies in coordinating these dimensions. Central to his theory of professional morality is the hypothesis of qualitatively different forms of decision making strategies. Oser has identified five types of orientations in teachers' attempts to solve professional moral dilemmas:

In the **avoiding** orientation, the teacher tries to "solve" the problem by not facing it. He does not want to take any responsibility for difficult questions. Somebody other than the teacher needs to find the balance of justice, care and truthfulness. In the **delegating** orientation, the teacher accepts the fact that he has some responsibility for dealing with the situation. The teacher does not want to make any decisions himself but delegates the decision making to somebody else (for example, the principal or the school psychologist). In the **single handed decision making** the teacher tries to settle the problem by taking it into his own hands. The teacher views himself as an "expert" who has the ability to solve the problem quickly and often in an authoritarian manner. The teacher does not need to justify his decisions to the other interested parties. In the **discourse I (incomplete discourse)** orientation, the teacher accepts his personal responsibility for settling the problem, and he explains how he has balanced justice, care and truthfulness in each new situation. The teacher also knows that the students are able to understand a well-reflected balance of justice, care and truthfulness. The final orientation is called **discourse II (complete discourse)**, in which the teacher acts similarly to one with a "discourse I" ori-

entation. The teacher goes one step further; he presupposes that all students and other persons who are concerned and involved are rational human beings who are also interested in and capable of balancing justice, care and truthfulness. The teacher holds this principle even in critical or aggressive situations (Oser 1991, 191–205).

The concepts of justice, care and truthfulness Oser uses in defining the professional responsibility of teachers have also been widely used in other models and orientations of moral judgment. The teachers need to be aware of these concepts and their meaning before they can make meaningful decisions in balancing them. To further explicate these concepts, we give a brief review of the relevant research related to these concepts.

2.1.1 Justice

The majority of research related to the moral domain has examined the development of moral judgment in general, based on the classical studies of Piaget (1932) and Kohlberg (1969). These studies represent the cognitive developmental approach in which moral behavior is considered to be largely dependent on moral judgment. Kohlberg has formulated a six-stage theory of moral judgment which he claims to be invariant and universal. The highest stage of moral development is reached when a person has become an autonomous moral agent who judges moral dilemmas based on the universal principles using deductive thinking in his judgments (Kohlberg 1976).

Kohlberg studied moral judgment and its development using the method of dilemmas. In dilemmas there is no "right" answer, but instead the presence of conflicting needs or principles. Subjects are stimulated to reflect on motives for choosing one or another of the solutions to the dilemma. Kohlberg analyzed responses with the aim of finding specific characteristics of the stages and thereby identifying the level of reasoning of the subject. He developed a standardized system of scoring for which he provided criteria in a manual (Colby & Kohlberg 1987).

The research results show that the educational background of a person is a very important variable in predicting his level of moral reasoning. Helkama refers to a Greek study in which the moral reasoning of teachers was studied. According to this study, the teachers ranked very high in their judgments measured with Kohlberg's scale. Of almost one hundred teachers, more than a half scored on the postconventional level of stage 5 in their judgments (Helkama 1993, 65). This study result might indicate that teachers have good potential for arriving at just solutions in their judgments. However, according to the model of professional morality presented in the earlier chapter, responsible judgments in educational settings require more than justice-oriented solutions. The teachers need to balance their orientation to justice with the orientations of care and truthfulness.

2.1.2 Care

In the moral orientation of care, the aspects of empathy and interpersonal relationships are central in reaching the most responsible judgment in a moral dilemma. Many times deductive thinking only advocates the most just solution, and inductive thinking can give more insight into the special case. Gilligan has criticized deductive thinking in Kohlberg's theory and emphasizes care and the importance of maintaining interpersonal relationships in an attempt at solving moral dilemmas (Gilligan & Attanucci 1988).

Dilemmas used by Kohlberg concerned obedience, authoritarian relationships, seriousness of cheating, etc. We can assume that in real life and in the educational setting teachers face very different kinds of dilemmas from the ones formulated by Kohlberg. Oser has asked teachers about their subjective theories concerning the notion of "ethos." The teachers were asked to complete the following statement: "A teacher has a high ethos if s/he ..." The study involved 210 teachers of all ages including both females and males. The teachers gave the highest priority to caring attitudes in relation to teachers' ethos. Truthfulness and commitment were also mentioned fairly often as important aspects of teachers' professional morality. Surprisingly, justice appeared least frequently as an indication of teachers' ethos (Oser 1991, 206).

Considering Oser's study, the teachers seem to put most emphasis on care in their professional conduct. Noddings has espoused an ethical ideal of caring in teacher-student relationships. This ethical ideal requires deep empathy, engrossment, and commitment on the part of teachers. In their work teachers must constantly nurture the ethical ideal of caring, which entails dialogue with their students. Noddings argues that ethical caring springs from deep biological and psychological structures and from the natural sympathy that we feel for each other (Noddings 1984).

In a caring relationship, one wants to do good for the other, understands him and his life situation and is ready to make an effort for the benefit of the other. The teacher cannot act or make important decisions for the student; he can only point out the student's potential for development. This kind of care is emancipatory in nature that aims at empowering the student.

2.1.3 Truthfulness

The importance of truthfulness in teachers' professional morality is easy to agree upon because teachers are dealing with knowledge and truth in their professional conduct. The pursuit of truth can be seen as the fundamental aim of all education. The leading research on teachers' professional morality has listed honesty as one of the main virtues central to successful teaching (Sockett 1993, 62–88, Clark 1990, 252–256).

Clark (1990) has defined honesty as telling the truth and acting in ways that are wholly consistent with what you know or believe to be true. The definition also involves refraining from cheating, lying, representing the work of another as your own, stealing, and

other dishonest deeds. In teachers' work, many moral dilemmas concerning students deal with telling the truth and preventing or correcting cheating (Clark 1990, 253).

There are some normative guidelines for teachers that articulate minimum acceptable professional behavior. The Representative Assembly published the Code of Ethics of the Education Profession in 1975 (Strike & Soltis 1985). The code consists of a total of sixteen should-statements that mostly deal with truthfulness. Half of the statements define the educator's obligations to the student and the other half his commitment to the teaching profession. The code is comprehensive and makes clear the basic responsibilities of educators to students and to the profession, but it has its limits, too. The code has been criticized for its lack of offering a philosophical justification of the fundamental ethical principles embedded in it. Additionally, in real life the obligations to our students and to our colleagues might clash (Soltis 1986, 2).

We conclude that the main challenge in teachers' professional decision making in the moral domain includes balancing the three different dimensions of responsible judgment: justice, care and truthfulness. We have given an overview of possible contents of all three of these dimensions. In the following chapter, we propose some alternatives to educate teachers to be more prepared to make informed and responsible judgments.

3. Different approaches in ethics teaching

3.1 Values clarification

Values clarification was introduced as a new alternative in the 1970's to teach ethics to any age level (Simon et al. 1972). This approach was claimed to be more effective than the traditional indoctrination that had been proven to be ineffective in teaching children moral values (Hartshorne & May 1930). In values clarification, the emphases are not on the content of people's values but on the process of valuing. The three goals of values clarification are **choosing, prizing,** and **acting**. People involved in the process are encouraged to choose their values freely among as many alternatives as possible, to prize and affirm their choices, whatever they may be, and to act upon their values consistently and with repetition (Simon et al. 1972, 18–22). The approach does not presume to identify or justify the desirable values. The moral values are considered to be personal values, not right or wrong, true or false. Thus this approach can be labeled values neutral and relativistic in the extreme.

The goals of recognizing, articulating, and expressing their own and others' views and feelings about values are relevant for teachers. We can assume that the process of clarifying one's values is a prerequisite for making responsible judgments in the everyday moral dilemmas teachers face. A values clarification approach has the potential to promote empathy, interpersonal skills and courage that teachers need in their decision making. On the other hand, the values clarification approach fails to provide teachers with the cognitive aspects of ethical inquiry also needed in the attempt to combine jus-

tice, care and truthfulness. The other danger of this approach is its potential to promote self-regarding, prudential reasoning that may be associated with narcissism and subjectivism. (Howe 1986, 10). We can conclude that the activities in values clarification are important steps in teachers' critical reflection on values but they are insufficient in meeting the aims of ethics teaching by themselves.

3.2 Applied Kohlberg

Unlike values clarification, Kohlberg's cognitive-developmental approach assumes that some moral positions are indeed better than others. Kohlberg's theory of cognitive moral development argues that higher-stage reasoning is uniformly superior to lower- stage reasoning. The advanced stages are less self-oriented, solve a wider range of social problems and reflect universal values such as fairness and human rights. In applying Kohlberg's theory to ethics teaching, the aim is to promote moral growth. Typically, this growth process is stimulated in the discussion of moral dilemmas. The task of the teacher is to expose the students to higher reasoning forms in techniques such as "plus one matching." In this technique, the teacher gauges the typical developmental level of a student's judgments. The teacher then introduces an alternative perspective derived from a moral judgment position that is just one level higher than the student's level. The teacher's comments are "matched" to the student's judgmental level but are a bit more advanced. This technique was drawn from experimental research showing that "plus one" exposure is the most effective means of inducing positive moral change (Damon 1988, 138).

Applied Kohlberg seems to be a very appropriate method in ethics teaching for teachers to adapt in schools. In teacher education, it does not have the same potential because teachers already master the highest developmental levels identified by Kohlberg (Helkama 1993). The challenge for teachers in the moral domain is not so much in applying the Universal Golden Rule or knowing the most just way to deal with children. The problems arise when justice clashes with care. The dilemma discussions used in thr applied Kohlberg approach could be modified as a method using case study dilemmas. These case studies can be real-life moral dilemmas that teachers have faced in their professional conduct. These dilemmas could be discussed in teacher education considered from all three points of view: justice, care and truthfulness.

3.3 Discourse ethics

The concept of discourse was first brought up by Habermas in his theory of communicative action (1984). He has identified two approaches in social action: strategic and communicative. In strategic action, the participants adopt a success-oriented attitude by following the rules of rational choice. In communicative actions, the social interactions are coordinated through co-operative achievements of understanding among partici-

pants. Discourse ethics is based on two principles. The principle of universalization assumes that "All affected can accept the consequences and the side effects its general observance can be anticipated to have for the satisfaction of everyone's interests (and the consequences are preferred to those of known alternative possibilities for regulation)." (Habermas 1990, 65). The principle of discourse ethics contains the distinctive idea of an ethics of discourse: "Only those norms can claim to be valid that meet (or could meet) with the approval of all affected in their capacity as participants in a practical discourse" (Habermas 1990, 66).

In a moral discourse a communicative action is adopted where all the members participate equally. In order to participate in the moral discourse, all the members are presupposed to be truthfully engaged in an attempt to construct a just solution. Another prerequisite is that all the members want the most justice- and care-oriented decision (Oser 1986, 919).

Oser (1986; 1991) has adopted Habermas' concept of discourse and integrated it into his decision making strategies for solving teachers' moral dilemmas. Oser argues that through ethical discourse the ethical point of view can be integrated into professional decision making. This discourse can be a practicable strategy of dealing with the moral aspects of professional problem solving. The basic requirement for participating in ethical discourse is a willingness to take the role of each party involved and also to give each party involved the possibility of being heard (Oser 1991).

In applying the moral discourse to a moral educational situation, four principles of discursive ethics should be remembered. These principles are: justification, fairness, consequences and universalization. The discourse is always a step back from the reality of the situation. It is an ideal form of solving a problem. In order to understand the situation at hand, one needs to have an understanding of a person's circumstances, knowledge about his needs and motives and an application of contextual rules. Oser has identified seven elements of moral education to which moral discourse can be applied (Oser 1986, 921).

Oser advocates the discourse ethics approach in teacher education because it has the potential of improving teacher-student relationships and the whole school culture. In adopting the discourse approach, the teachers teach their students both responsibility and justice and at the same time encourage social learning (Oser 1991, 223–226).

4. Encouraging ethical discourse in teacher education

4.1 An alternative way to assess the effectiveness of teachers' problem-solving strategies in their professional moral dilemmas

Before we can plan a program to improve teachers' problem-solving strategies in the moral dilemmas at school, we need to assess the current strategies the teachers are applying to the moral dilemmas they encounter in their professional conduct. In this article, we present one alternative way to evaluate the professional morality of teachers from one particular school. We adopt a case study approach by exploring the moral dilemmas as identified by thirty-three teachers. A majority of the teachers are subject-matter teachers who teach in a lower-secondary school. The school is located in Vantaa, close to Helsinki, and has a diverse student population. The teachers of the school have been very active in participating in different kinds of research projects to improve teaching and learning in their school. They all acknowledge the need to be more prepared for the moral dilemmas their diverse student population challenge them to face in their everyday work. We find this particular school with highly motivated teachers and a diverse student population to be an ideal school in which to study the moral dilemmas and their solving strategies.

The first phase in our study to assess the effectiveness of teachers' problem-solving strategies in moral dilemmas is to interview all the teachers. In a personal interview, the teachers are asked to identify a difficult moral dilemma they have faced in their professional conduct. The teachers are encouraged to describe the dilemma in detail and give as much information as possible about all those participants involved in the dilemma. Our goal is to get as accurate a picture of the dilemma as possible. After the dilemma is identified, the teachers are asked the strategies they used in trying to solve it. The teachers themselves are also asked to evaluate whether the strategies used in those problem-solving situations have been effective enough. We also ask the teachers to evaluate their teacher education in respect to the moral dilemmas they have encountered. Did teacher education give them any readiness to face these problems? How can we improve teacher education to give the teachers a better mastery of problem-solving strategies which moral dilemmas require?

In analyzing the interviews, we are going to pay special attention to the problem-solving strategies teachers have used in solving their moral dilemmas. The strategies used are compared to those identified by Oser (1991). We are also going to investigate the arguments teachers use in justifying the actions they have taken in those difficult moral dilemmas (Toulmin 1958). This perspective will allow us to assess the argumentation skills of the teachers.

In the next stage of the study, the teachers are given feedback regarding the results. We argue that the process itself, identifying and reflecting on the moral dilemmas and their solving strategies, would increase the ethical awareness of teachers. The process

can also continue as action research if the teachers feel the need for that. In action research, the teachers can discuss the cases identified earlier and together aim at finding better solutions to them. The teachers might want in-service education in ethical discourse to give them the necessary concepts needed.

Regardless of the actions that result, we will conduct a follow-up interview with the teachers a semester later. In this interview we can assess if there are any changes in the dilemmas the teachers identify or in their solving strategies. This follow-up interview will give us valuable information about the possible changes in teachers' professional morality. We will also gain valuable information to improve teacher education to better meet the needs teachers have identified.

4.2 The future challenges for teacher education

In this article we have presented a model for studying teachers' professional morality (Oser 1991). In this model, a real-life educational setting is assumed to be the context of the moral dilemmas teachers face in their professional conduct. Different approaches to ethics teaching have been reviewed with an emphasis on the strengths of discourse ethics. We argue that in this approach teachers can best combine the three dimensions of responsibility: justice, care and truthfulness.

In teacher education, the current emphases on the autonomy of the teacher require re-evaluation in the models and methods of ethics teaching. We need to prepare teachers better for those professional dilemmas they encounter. The hypothetical dilemmas formulated by Kohlberg are not appropriate for this task; we need actual case studies of those dilemmas that teachers have experienced in a professional context. These case studies could be used in teacher education combined with the discourse ethics approach. In this way, the teachers could practice communicative action with real- life situations. In this article we have presented the design for our empirical study in exploring the professional dilemmas identified by teachers and their strategies in solving them. The results of our forthcoming study will allow us to evaluate teachers' problem-solving strategies and their argumentation skills in justifying their professional decision making.

The real-life moral dilemmas in schools can be used with both student teachers and in-service teachers in discussing the diversity of situations teachers face in their work. Using the real professional dilemmas, teachers can practice problem-solving strategies for the future. We do not know all the necessary qualities for the future teacher, but we do know that we want to educate teachers with high professional ethos to better serve the diversity of students in our schools.

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Teachers' readiness for modern information technology

Martti Piipari, Hämeenlinna

Abstract

The purpose of the article is to depict the teachers' abilities to use modern information and communication technology hardware and software as a part of their work. Up-to-date criteria are needed for evaluating the teachers' abilities and the effectiveness of teacher education. The criteria can be formed by analyzing the rapid social and information and communication technology related changes that impact the skills the teachers need in their work. The article collects a group of experts' statements and gives examples of criteria for evaluating the teachers' basic skills and specific readiness to apply information and communication technology as a part of their work in open learning environments. Even though some of the teachers already possess the required basic skills, most of the Finnish teachers inevitably need additional and supplementary education in the field.

Key words: Information and communication technology, teachers' skills and abilities, evaluation criteria

1. Introduction

This article is concerned with analyzing teachers' readiness for modern information technology. Readiness means that teachers have skills to use modern information technology and related applications in their work and that they have positive attitudes towards modern information and communication technology. Readiness also means innovative activities. Active teachers may be pioneers who are enthusiastic about educational applications. They may be hackers or just leading the way (Tella 1995, 394). Before we can evaluate the teachers' skills, attitudes and activities, we have to analyze their contemporary and forthcoming working conditions in the information society.

Information technology, communications (telecommunications) and their applications have been selected to be the accelerators of the development of society in several European countries, including Finland (for example, White Paper 1995, 28; Cochinaux & de Woot 1995, 10). According to the education and information strategy prepared by

the Ministry of Education of Finland, every single Finnish citizen should be able to master the basics of information technology in the future (Ministry of Education 31.1.1995). On January 18, 1995, the government made a principle statement with reference to actions needed to generate a Finnish information society. The objective of the information technology strategies is to raise the level of research and technology. Furthermore, fundamental changes in making health care, information exchange, remote working and administrative services more efficient are considered as the essential goals.

The preparation work made in the Ministry of Education and the statement of the government influence teachers and the education of teachers, since teachers are considered to be in a key position in developing the information society (Linna 1995, 24). The information technology strategies planned to be implemented in the near future require changes in the curricula, the role of a teacher and in practical education tasks. The changes also require that students, teachers and communities engage themselves in developing information and communication technology as a part of their normal activities (for example, Linna 1995, 25; TPK Committee 1995, 11–12). The message given by the team is that the teachers' capabilities and their skills in information and communication technology have to be evaluated both considering the present situation and from the viewpoint of demands for changes in the near future. The current situation will very soon be history.

Revising the education system has been considered essential in the principle statements and the reports of the teams: the system has to be able to ensure the people all the essential basic skills needed in the information society. Because the teachers are thought to be in a key position in the development, changes are demanded in the structure, content and ways of working of the education of teachers. The report of a work group that clarified the basic skills needed in the information society contains surveys of the resources needed by the education system (TPK Committee 1995, 11–12).

Most of the plans for the future of information and communication technology have similar problems due to the rapid development speed of the field. Predicting the future is especially hard in the field of information and communication technology. Forecasts and targeted plans are easily presented on a very general level and thus it is difficult to evaluate their fulfillment. In addition to setting general goals and giving strategy definitions, it has to be possible to specify the instructions derived from them as practical activity that can be systematically evaluated. The system should be flexibly adjusted when needed. The Ministry of Education and the TPK Committee have taken the need for constant evaluation of research and activity related to information technology into account in their plans (Ministry of Education 31.01.1995, 6–7; TPK Committee 1995, 22).

2. What Are Modern Information and Communication Technologies?

Information technology is said to provide a medium for creating, storing, retrieving and communicating information. Many researches have pointed out that our way of using information is the way of communication (Tella 1994a; Tella 1994b; 1995, 394; Kist 1989, 603; Opheikens 1990, 265–266). Thus we should talk about **information and communication technology (ICT)** if we want to emphasize the communication term. Information and communication are closely related: as communication is a process of social exchange, information is the object of the exchange.

The short history of concepts includes the terms ADP (automatic data processing), CBE (computer-based education) CAI (computer-assisted instruction), CAL (computer-assisted learning) and CMI (computer-managed instruction). They all indicate the important role of computers and various modes of software in education (Tella 1994a; Tella 1994b; Tella 1995, 394; Rushby 1989, 149–158).

The classification in Table 1 gives a general outline of different ways of using computer applications in education. Seppo Tella (1995, 396) has tried to classify the main technological developments (in the left column of the table) and some references to possible educational applications or emphases (the right column). The classification draws an oversimplified image if we do not realize how the components overlap. Many components have features in common, which means that emphases mentioned in the right-hand column belong to several technologies and vice versa.

Table 1. Classification of modern information and communication technologies (Tella 1995, 396)

Computers as stand-alone machines		"Traditional" software
Audio conferencing	⬆	Computer-based training (CBT)
Audio-graphics	⬆	Traditional distance education
Telefax		Rapid information exchange
Computer conferencing (on-line interaction, e.g. e-mail, chat etc.)	■	Distance and multi-mode education and open learning
Interactive CD-ROM	■	Individualized learning
Multimedia, hypermedia		Simulators
Desktop video	■	Electronic performance support systems (EPSS)
Video conferencing		Intelligent tutoring systems (ITS)
Virtual reality	⬇	Distance and multi-mode "full channel" communication and interaction
Virtual computing Ubiquitous computing	⬇	Experimental learning

Although the classification mentioned above has some overlapping components and the references to educational applications are somewhat imperfect, it has a number of important advantages. The temporal dimension covered by the left column is fairly long, starting from the very beginning of using computers as stand-alone machines to ubiquitous computing in the future. The classification also shows the complexity of the field. Usually the previous classifications have concentrated on the contemporary applications only (see Hannafin & Peck 1988, 356–365; Lifländer 1989, 35; Tella 1994a; Pea 1988, 203–204). The first nine technologies mentioned in Table 1 — from computers as stand-alone machines to video conferencing — are technically ready for use today in the general school system. Virtual and ubiquitous computing seem to be certain ideal concepts which mean, if true, that computing has been wholly integrated into all educational systems. We may easily realize the large difference between contemporary computing technologies in the school systems and the wholly integrated system somewhere in the future information societies.

While technological developments in information technology have been very quick and extensive, the developments and trends in teacher education have not been running at the same speed and in the same directions. If the teachers are not properly trained to exploit the technology in their teaching, progress can not be guaranteed.

3. Information Technology Trends in Teacher Education

Teacher education is currently undergoing changes throughout the world (Gardener 1995, 1). In many countries pre-service training is changing from institution-based to almost wholly school-based. Reductions in higher education budgets affect the teacher education. At the same time the resources are more and more allocated on the basis of functional effectiveness (Niemi & Kohonen 1995, 85). Gardener (1995, 1) argues that all these trends may be putting at risk the gains made by teacher education institutions in developing innovative approaches to teaching and information technology-competent teachers.

In the early 1980s many education ministries throughout the world realized the beginning of the information age. Most of them took a computer-centered approach, which often meant introducing the hardware to schools and encouraging the special study of computer science. A smaller group of the early beginners also introduced the hardware but took a learner-centered approach, encouraging the development of the computer's role throughout the school curriculum. Still others decided to wait and see (Gardener 1995, 1).

Here in Finland we have had all of those groups at the school level. There are still thousands of teachers who have not been trained to use information technology. At the lower level of the comprehensive schools in Finland, there could be as many as 43 pupils per microcomputer (Huovinen & Lakkala 1992). For the last four years, almost the whole school system has only been waiting for new information technology. The other side of

the mirror shows us many very innovative schools, teachers and pupils who are extensively applying information and communication technology in their daily work.

4. Information and Communications Technology Related Evaluation of the Effectiveness of the Education of Teachers

When looking at the decisions concerning the development of the Finnish school system, it is easy to notice that too few resources have been addressed to information and communications technology so far. The weaknesses concern both material and intellectual resources. The education of teachers in the field has been insignificant and random. The flaws in hardware and software environments strongly hold back the influence of the education. Without any resources it is difficult to show skills in using educational applications based on information and communication technology. Currently, the conditions are not similar everywhere. In Finland we have schools which are ready to provide very good environments for open learning with modern hardware and very effective software applications. Most of the comprehensive and secondary schools, on the other hand, have very old-fashioned equipment, and that is why they cannot use any modern software (TPK Committee 1995, 29–32).

Because of this, for the time being, when evaluating the effects of education on the teachers' information and communications technology skills, we have to limit the evaluation to those training programs that already take the needs of the students into account. Most of the universities have already given education aimed at developing information and communications technology abilities, and thus it is possible to estimate how effective the education has been (TPK Committee 1995, 31).

The abilities preceding the exploitation of information technology are usually mainly obtained by educating oneself, or at least by gaining experience in the environment in question. The effects of education can be expected to clearly emerge as a teacher's abilities because the hardware and software environments are based on the artificial, systematic logic of a human being. Native experts in information technology applications probably do not exist, but the time and amount of work a student needs to learn the logic and procedures of the applications probably vary in the very same way as in learning in general.

The pronounced differences in the teachers' attitudes and innovation adaptation speeds that are related to either favoring or resisting innovations emphasize the variation of the studying results (Kuitunen 1996, 198). Kuitunen also points out that the innovation diffusion related to the Finiste information network was in practice a wider and more multistage process and took more time than the people who planned the project actually expected. Atjonen (1995, 156) notes that even though certain strengths of information technology have been verified by the research results, they are spreading out to schools very slowly. Traditional teaching arrangements and forms of learning environments have

turned out to be very enduring. Syrjäläinen (1992, 34–35) also reports about the teachers' resistance to change towards innovations. Altogether, the Finnish information strategy program has to deal with a very wide innovation diffusion; thus it may prove to be very complicated and difficult to comprehensively control the fast ongoing changes.

Traditionally the attitudes towards using information and communications technology have been dependent on one's gender. In the Finnish education of teachers, this is a particularly significant fact, since the group of people being educated to become teachers is distinctively dominated by women. On the other hand, women are clearly a minority when it comes to using modern international information network services for example (Järvinen 1995, 15). It is obvious that when planning and accomplishing the information technology education and related support services, the dominance of women students has to be taken into account on the education system level.

The rapid, occasionally even chaotic speed of change in the field makes evaluating the information and communications technology-related effectiveness of the education especially difficult. The decisions made today and the current education will probably be at least partially out-of-date after just a couple of years. Because the rate of change is so fast, many experts observing the field think that people who can not cope with the chaos may generate a fierce defense reaction (for example, Helsingius 1995, 23). This reaction could produce diverse fundamental movements, lead to drawbacks in development and divide people into different sub-cultures. If the teacher education departments are not able to accomplish changes that are required by the networking education system to adapt the use of information technology, the division of people and confirmation of the polarization effect could emerge among the people being educated to become teachers, too.

When evaluating the effectiveness of the education on the teachers' readiness and skills in using up-to-date information technology applications in modern learning environments, we must first define the evaluation criteria. When defining them we can not just depend on the current situation. The rapid need for change leads to the fact that the list of the teachers' skills needed in using modern information technology and educational applications depends on the decisions the government, local authorities and school boards make in the near future. The decisions that affect the required teachers' skills include especially those that concern the education system resources, arranging the teachers' basic and supplementary training and reforming learning environments.

Decisions that deal with accomplishing supplementary training for the teachers are especially essential, because currently most of the teachers completely lack abilities to use modern information and communications technology applications as a part of the school work. The field is so young that not nearly all of the teachers have even had the chance to gain the required knowledge during their basic training. Even though the teachers' supplementary education system was relatively active during the eighties, it was not nearly enough to cover all the teacher groups (for example, TPK Committee 1995, 30–31). The Finnish computer education courses that were carried out in the 1980s (TOP-1986, TOP 1989 and TAKO 1991) are now criticized for having been pedagogically one-

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sided; besides, the teachers have not been able to exploit the new opportunities provided by the information technology (TPK Committee 1995, 30).

The change of policy in the general education curricula causes a particularly big practical change in the school system level. The information technology education has been transformed from a separate school subject called 'computer science' to an entity covering all the school subjects. Each and every school, subject and teacher are the details that determine how information is distributed to the pupils at the school level.

Additionally, it must be realistically taken into consideration that the basic training of teachers may in its general form prove to be insufficient to supply the teachers with the special knowledge required by modern learning environments and organizations. Thus the matter should already be dealt with when picking out new students (for example, Atjonen 1995, 156).

5. Information and Communications Technology Skills Required by Open Learning Environments and Networking

The teachers' basic skills may be defined by experts who have plenty of experience in using information technology and consulting people. The experts usually define the aims and objectives for the training sessions and curricula. Experts also tell us their opinions in conferences and in books and articles they publish (Clarke 1990; Schwier & Misanchuk 1993; Nielsen 1990; Maurer 1995; Koski & Oesch 1993; Jonassen & Mandl 1989).

The Ministry of Education has had access to a number of experts in preparing the Finnish Information Society program. Certain areas of development and directions in which the financing of the information and communications technology education will be directed have been defined, being based on the statements of the experts and workgroups (Ministry of Education 1/31/1995). The main guidelines of the financing program seem to lead in the direction of information technological application skills needed in accomplishing open and flexible learning environments via changes in the education culture.

To make the computer a part of daily school work, the teachers must be instructed in evolving the use of computers and information networks as teaching tools. Supplementary education of university teachers is thought to be required especially in the following fields: using the computer as a teacher's tool, making use of new information sources, electronic publishing, utilizing and creating multimedia and instructional use of the Internet. Financing policies show that the predicted needs of teacher education are wanted to be channeled in the directions in question. The abilities of both the teachers and the teachers' educators are presumed to require development in the chosen sectors. Based on the choices made so far, one could say that either the effects of the education of teachers have not been sufficient so far, or adequate up-to-date attempts to direct the education of teachers into preferable directions have not been made yet.

The department of teacher education of the University of Helsinki was one of the first Finnish institutes to publish a proposal of its own concerning solutions related to the information strategy program. Plans that aim at accomplishing networking and open, flexible learning environments are emphasized in the proposals for communications technology curricula intended to be appended to the education of teachers in the universities of both Helsinki and Tampere (TPK Committee 1995, 12).

To define a starting point, the TPK Committee recommends the following in the proposal of the department of teacher education of Helsinki for an implementation of the information strategy program:

> "The teacher education departments must develop their curricula so that already during the basic education the teachers will obtain enough knowledge on information and communications technology to be able to learn how to use new computer devices and applications as a part of their work and also evolve the educational use of them independently." (TPK Committee 1995, 11.)

The ability to independently develop new applications is considered to be a part of a teacher's professional skills. During the teacher education the students become familiar with the possibilities of information and communications technology and learn to use them flexibly. The TPK Committee recommends that the curricula should fulfill the following goals:

- Give the students the versatile basic skills of communications and acquiring and managing information that they need in their studies and are required by the information society; they should also be given the ability to instruct the pupils in a school to learn the same skills.
- Give the students such basic skills required by the information society that correspond to the demands of the networking and continuously changing international working life.
- Make the students familiar with the status of information and communications technology in the basics of curricula and the possibilities they provide in arranging information and communications technology lessons in the school level. All the students should use information and communications technology applications during practical training in teacher training schools and distance teaching.
- Develop such abilities of a student that he or she can constantly educate himself, learn the use of new devices and applications, evolve the educational use of the applications and keep his knowledge up-to-date.
- Give the students readiness to examine and evaluate the educational use of information technology.

The goals significantly emphasize those application skills of information and communications technology that are related to open learning environments. Change in the traditional education of teachers is proposed, for example, by necessitating practical training of all the students. The inclusion of distance teaching and information networks as a part of the education of teachers changes the curriculum relatively much from what has been accomplished before this. In addition to the need for additional resources the TPK Committee has also paid attention to keeping the standard of equipment up-to-date. The group

wants to make the use of computers and applications easier by decentralizing them into several locations in lecture rooms, libraries and corridors.

The proposals of the TPK Committee pay special attention to multiform education of the staff of the teacher education departments and committing the staff to making use of information and communications technology. The teachers' educators also need to be made familiar with the didactical principles of the field and with integrating information and communications technology with pedagogical teaching. More resources will be targeted into developing versatile educational material and improving the research conditions in the field.

In addition to the actual proposals for actions, the TPK Committee has also collected background information concerning the changes of the society, learning environments, distance teaching and diverse forms of the virtual school that is necessary when planning educational use of information and communications technology. The information depicts alternative models of the real world, according to which the practical implementation of the proposals could occur.

The evaluation of the effectiveness of the teacher education requires very accurate knowledge of information and communications technology and its realization. In the evaluation, it must be possible to unambiguously interpret whether a goal has been achieved during the education or in a subsequent phase of the working life. When has a student obtained sufficiently versatile basic skills of communications and acquiring and managing information, plus the ability to guide the pupils in a school to learn these skills? Specific criteria are needed for the evaluation.

6. Teachers' Skills in Using Modern Information Technology and Educational Applications

The skills of the people studying information and communications technology are measured by universities, colleges and other schools and special organizations authorized for the purpose. They have turned out be necessary because the grading system of the schools belonging to the school system does not necessarily as such measure how up-to-date the practical information and communications technology skills of a student actually are. In England and Wales there are several examination boards offering syllabuses for National Curriculum Information Technology (IT) and GCSE Information Systems (IS) (Knott & Waites 1995; Crawford 1994). In Finland, the Information Technology Development Center (TIEKE) in association with the Ministry of Education has devised a user examination consisting of seven different tests. The examination is called a "Computer Driver's License." It is intended for anyone who wishes to test whether he or she has the computing skills widely required by today's information society. The Finnish teachers do not have any "Driver's License" of their own, but TIEKE has plans to develop special "licenses" or certificates for teachers.

Information and communication skills of the teachers should be classified in such a way that the basic skills that a teacher has to master — regardless of the actual job description — should be the starting point. On the other hand, the school system requires special knowledge when it comes to coordinating large educational departments, their information services maintenance, continuous need for updating and wide learning material projects. Additionally, the skills can be divided into a teacher's personal abilities to use information and communications technology and to instruct and guide the pupils in learning the mentioned skills.

The contents of the next pages will contain an analyzed list of the teachers' basic and advanced skills in using modern information technology and educational applications. The analyzed list of skills will also depict the main criteria for evaluating the effectiveness of teacher education in this field.

Table 2. The teachers' basic information and communication technology skills

1. Installing and using general operating systems of microcomputers	7. Using hypertext and multimedia systems for designing and implementing simple multimedia learning material
2. Installing and using graphical user interfaces (GUI)	8.Using modems and terminal software for data communications
3. Installing the general application	9. Using Local Area Network
4. Using General Purpose Packages for Microcomputers	10. Using the Internet and other general
4.5. Using word processing for creating documents	
4.2. Using spreadsheet worksheets and graphics and general statistical programs	11. Management of documents in open, flexible multimedia learning environments
4.3. Databases construction and operation	12. Installation and use of the common peripherals and related software in a microcomputer environment
4.4. Using graphics packages, business graphics, graphic design and presentation graphics software	13. The ability to successfully guide the equipment and applications in the learning environment
5. Skills used for desktop publishing (DTP)	14. The ability to instruct the pupils to use communications devices and software
6. Using knowledge-base systems	15. Skills of purchasing and updating applications and hardware

The analyzed list of teachers' basic skills in Table 2 is still expressed at too general a level for the evaluators. They need more exact classifications. For the evaluators, the teachers' skills in using word processing programs mean creating a document, editing guidelines, using editing facilities, formatting a document, making mail merge and ad-

dress labels, using more advanced topics for complex documents, adding graphics, and importing and exporting text and graphics.

The teachers' advanced information and communication technology skills include:

- Knowledge about installing and maintaining local area networking software and hardware environments
- The ability to design and accomplish large learning material projects based on open multimedia learning environments and the ability to guide pupils in creating learning material projects of their own
- Versatile abilities of using application development and programming tools and teaching the use of them to the other members of project workgroups.
- The ability to use updated computer devices and applications as a part of their work and also evolve the educational use of them independently in open learning environments.

The teachers who have attended specialization or degree studies during the 1990s have probably gained the necessary basic knowledge of information and communications technology. Although their education has not necessarily included all the required skills, their abilities to study independently are most probably sufficient to keep their knowledge in the field up-to-date. A vast majority of the Finnish teachers, however, is desperately in need of opportunities to educate oneself to adopt the skills of using and teaching modern information and communications technology required by the society.

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International teacher education as an attempt to provide competencies for a multicultural and international world

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Abstract

The article discusses the competencies teachers need in the interdependent and multicultural world. It starts with the argument that although internationalization and multiculturality are phrases often quoted they have been given various and even conflicting meanings. Accordingly, theories and practices for multicultural education have varied as to their aims, approaches and scope. The article supports the human rights development process as an important basis for international education. The article introduces the M.Ed.program in Oulu as an example of multicultural teacher education where competencies for international teacher education have been considered. The special competencies suggested are cultural awareness, intercultural competencies, and a commitment to combat racism. Finally, the article draws attention to the danger of teacher education fostering ethnocentrism without realizing it.

1. Varied meanings of internationalization and multiculturality

Internationalization has become a reality and challenge both in education and in wider society. In public discussions and schools, the terms internationality and multiculturality have, however, acquired varied and different meanings, contents and aims. Very often language skills, knowledge and experience about other cultures are mentioned as prerequisites for internationalization. At present, technology and computers have also gained a lot of attention as means of communicating with distant regions and nations.

The variety of meanings also applies to schools which have one way or another profiled themselves in international or multicultural aspects. Even aims and history can be very different among them. Originally, many international schools were elite schools with high fees, and they aimed at certain cultural and academic standards and ideals. In spite of their international definition, they could follow the curricula of one or two coun-

tries — the United States, England, or France, for example. Students, however, could represent many nationalities and cultures.

On the other hand, the history and position of UNESCO schools have been different. They are usually normal state schools with a special mission to work towards the aims of United Nations declarations. In addition to that, there are several schools which have not defined themselves as international but which face multiculturality in everyday work. Examples are Finnish schools abroad and schools with students from different nationality, ethnic and language groups.

There are also big differences in the range of internationalization. Some schools concentrate on two cultures. For instance, in Finnish schools in Stockholm or St. Petersburg it is sensible to get acquainted with Swedish or Russian cultures, respectively. In many schools, the emphasis seems to be on Europe, and it is one of the strategies of the European Union to include modules of a European dimension in the school curricula and to guarantee the so-called European standards in schools. There are, however, schools which systematically aim at a wider perspective and which strive for global awareness, responsibility and a sense of togetherness among all nations.

Cultures meet more and more in the same person — there might be people from several ethnic groups in the same family and two to three different languages spoken in it. In addition to that, people travel and meet people from other cultures abroad. Internationalization and increasing multiculturality seem unavoidable. It is time for educators to consider how to prepare future generations to meet other cultures and still preserve their own identities and own qualities. Many taboos, like the role of national identity in structuring one's identity, should also be discussed when international schools increase and when families live in various countries and have different ethnic influences. Knowing and understanding one's own history is essential for one's identity, but other elements besides nationality can be important, too, and one's identity can be bicultural and have elements from several cultures.

Within one culture there are also many subcultures — countryside-city, northern-southern, social class — which can have a strong influence on personality. Perhaps the monoculturality of Finland has been just a myth. Maybe Finland has in many ways always been multicultural; the schools just have not considered it until it has become visible and inescapable. One also has to remember that one's identity is not static but dynamic, and different components can be central at different stages and contexts of life (Noel 1995, 268).

2. Education for a multicultural and international world

One often hears the question whether education for an international world is possible and whether one can be taught competencies for meeting and understanding otherness. It is also argued that racism, prejudices and stereotypes are hard to abolish among adults. True, bases for many attitudes and dispositions are created in childhood, and changing

them in later life is not easy. It is not impossible, however: an individual develops continously through knowledge, experiences and action. The growth often requires a long-term expedition into oneself and one's own history. In addition to meeting representatives from other cultures, one has to recognize one's own culturally created dispositions, perspectives and structures which prevent one from understanding others (Bennett 1995, 261; Cabello & Burnstein 1995, 285–286; Harrington & Hathaway 1995, 277–282).

Education for internationality (kansainvälisyyskasvatus) is mentioned early in the aims for the Finnish educational system at different levels. In the curricula for the 1970s and 1980s its scope is wide, including education for human rights, peace, equality, environmental concern and respect for other cultures. The aim is to educate for international understanding, collaboration and peace. Growth for internationality is mentioned as the core element of ethical education, and emphasis is laid on educating citizens with a global concern and responsibility.

The curricula for the 1990s pay more attention to knowledge of other cultures, multicultural education and value discussion. They state that the future is open in many ways, but schools should play an active role in giving direction and leading the way. That presupposes ethical deliberation and value discussion. The discussion is not left without any guidelines, the curricula mention the United Nation's Human Rights declarations and classical values like goodness, truth and beauty as the bases for such clarifications. Special attention is paid to respect for life and human dignity and worldwide declarations, recommendations and agreements which try to safeguard human rights and the well-being of the globe.

The curricula's models of educating for internationality and multiculturality follow the general idea about constructing identity: first you learn about your own culture, then about your neighbors, then Europe and finally other cultures. Maybe that approach was valid before television and videos. At the moment it is problematic, however, because if giving knowledge about remote cultures is delayed, the mass media form pictures about them, and it is difficult to correct or reconstruct these images later. What is vital in international education, in my opinion, is whether students understand from the very beginning that besides being Finns they are, above all, world citizens. From very early on they need knowledge about both their own cultures and other cultures. They need to understand that people are simultaneously similar and different. In spite of cultural diversity, people have similar emotions and needs, and a long history of humankind as their common tradition. It is equally important to teach species identity as to develop a local one (Boulding 1988, 64–74). Whether education concentrates on differences, conflicts and competition, or whether it emphasizes collaboration, responsibility for others and solving problems peacefully is a central issue. The guiding principle is respecting and understanding other cultures but not tolerating violence towards human rights. Students should develop the courage to act for justice in the world.

Respecting the diversity of cultures is key to multicultural education, but it has been accompanied by the search for common ethical principles to guarantee consideration of others, peaceful cooperation and well-being (Gerle 1995, 9–12). Human rights documents are one manifestation of such a search. They are signs of people's moral con-

sciousness and the result of a long effort. The Declaration of Human Rights was the first agreed-upon document of the United Nations and as such very valuable, but it has been followed by many other agreements concerning children, women, migrants and minorities. The documents differ as to their scope and nature. Declarations are usually only morally binding, but some of the documents have been ratified and thus made legally binding, too. The human rights process has not been easy, and from the very beginning it has also been a history of discussions between cultures, ideologies and different understandings of the individual-society relationship. At the beginning, the western industrialized countries had a majority in the dialogue (Helminen – Lång 1987.)

Human rights documents are not well known in the educational field. The Human Rights Declaration is usually acknowledged, but the successive agreements, which can be wider, more detailed, specific and legally binding, have received little attention (Räsänen 1994, 190; and 1996, 86). If these documents, and especially the dialogue round them, are unfamiliar, it is difficult to understand the nature of the process and its phases. Similarly, it is hard to comprehend the difficulties faced when representatives of various cultures have searched for mutual agreements — to understand that what is natural for some people can be totally incomprehensible for others. Still, it is very encouraging and reassuring to realize that in spite of that, decisions have been reached and agreements have been signed — and the human search and human rights development has continued.

Human rights documents are results of a long process, and they are a valuable starting point when searching for common value bases for education. The process and the series of documents are unfinished; the dialogue between cultures must continue. A multicultural school and world require that we also test our understanding of human rights continuously. In that discussion the relationship between universal and specific has become central: which values and ethical principles are valid globally, which can and should be specific with different cultures, societies, groups and individuals. From this point of view, we could argue that education in the international and multicultural world needs teachers who are world citizens with global ethics but who also comprehend the specific needs and dimensions of different cultures. We need teachers who have competencies for meeting and understanding otherness as well as concern and courage to overcome the barriers. (Sunnari & Räsänen 1994, 149–162.)

3. International teacher education: aims and contents

One often hears it said that change is the only permanent thing in modern societies, and teachers should remember that they educate future generations for a rapidly changing world. Increasing internationalization and multiculturality are considered to be one of the tendencies in the future development. Teacher education has to respond to the challenges and influence the course of the change. Rapid changes need active and autonomous teachers with clear values and capabilities for dialogue. Otherwise, schools will end up

somewhere without their own will or participation in forming their own futures. Educators should also ask what kind of internationalization they want, what its purposes, aims, motives, contents and range are on whose terms and in whose interest it is done and what it means.

We have tried to respond to the challenges of a multicultural future at the teacher education department of Oulu University by starting a new M.Ed. international program which provides students with a master's degree and teacher's diploma but attempts to provide special capacities and skills for working in multicultural contexts.

The selection of 20 students (autumns 1994 and 1995) from many applicants was not easy. Special attention was paid to language skills, knowledge about society, previous studies or work in multicultural contexts, and of course motivation. It was also stated that the students are expected to take part in the development of their study program. As a whole, the selection boards (at least officially) mentioned that they are looking for innovators and critical thinkers for teacher education and schools but also for wider society. In the selection, attention was paid to collaboration skills but they are to be considered during the program, too.

One special criterion for this program was to choose groups that in themselves would be multicultural. Thus the students' home places vary from Helsinki to Utsjoki and from cities to countryside, and the groups have representatives from minority cultures. Some of the students have lived for years in Scandinavia, Europe, Saudi-Arabia or Africa, while others have no extensive experience working in multicultural contexts. Although the language of tuition is mainly English, students are encouraged to study other languages, and there are speakers of rarer languages like Arabic, Saame, Swahili and sign language. Geographically, students' interests also vary: some of them want to work in Finland in multicultural classes, others aim at international schools or development and research work in neighboring countries, Europe or outside Europe. Fairly many are interested in development projects with the Third World. Both the students themselves and most of the staff have been satisfied with the combination of the students; the students have learned from each other's cultural backgrounds and experiences. Students have also shown great initiative in developing the programme, suggesting new courses and finding international contacts.

One third of the studies in the M.Ed. program is similar to that of other students in teacher education, one third partly similar with special orientation, and one third especially planned for the international groups. The special courses introduce students to the cultures, educational systems and policies of various countries and deal with multicultural education, global issues in education, and comparative education.

At the very beginning of their studies, students take part in the so-called Icons simulation project, where students representing different countries negotiate via computers and video about current issues in world affairs. The simulations are preceded by serious study of the topics and of the represented country. This year Finnish students represented Namibia, which was meant to acquaint them with the country and give them an idea of the role and position of a developing country when negotiating with world powers about world politics. The aim of the whole project is to open a global perspective to education

and to show how education is connected with other areas of life. It is also meant to raise ethical questions and deliberations from the very beginning.

Within the first two years, students learn about European educational systems and cultures, educational philosophers and policies. The study units include excursions and have visiting lecturers from the countries dealt with. Within the teaching practice, students have periods of work both in Finland and in other countries. The third-year course about global issues turns attention back to worldwide concern and concentrates on human rights, equality, peace and development projects in education. Parallel to all other studies during the three years are tutoring sessions and studies in multicultural education. They try to offer knowledge and experiences about different cultures and raise open discussions about one's professional development in a secure atmosphere. The tutors develop the program together with students, collect feedback about its effectiveness and follow the development of students' professional orientation.

Advanced studies include longer periods of working practice and a research paper, which is written in English and hopefully contains multicultural or comparative aspects. Most of the students have decided to do part of their minor subject studies or research data collecting abroad.

Graduates from the program should have various possibilities of working in different occupations and countries depending on the choice of courses within the program. Teaching multicultural classes in different countries, educational planning duties, project leader and co-ordinator duties, international educational consultant work, educational administration, and taking part in multidisciplinary research projects seem to be interest areas at the moment. One important aspect of the follow-up research is to find out what the students' future occupations are and how the program has been able to meet those needs.

So far, experiences with the international teacher education have been encouraging. The groups have benefited from their multiculturality, and the students have given new color and inspiration to other students, too. The new groups have forced the department members once again to check the contents, methods and structures of their teaching to suit the group's orientation. This has not been easy in all cases. Excursions which have been preceded by efficient preparation have been especially educative. Meeting and working together with members of other cultures helps one to understand them. However, it is equally important to learn to notice the culturally built dispositions, value systems and ways of thinking in ourselves which make it difficult to be open to new ideas and to meet otherness. Finding these growth-preventing constructions in oneself has often been most painful for both students and teachers. The two years of the M.Ed. international program have been full of processes of deconstructing and reconstructing. It has been a valuable learning experience and shows promise of increased cultural understanding and global awareness.

4. Competencies for working in a multicultural world

Teacher education programs have traditionally been very ethnocentric, and there has not been much discussion in Finland about what multicultural teacher education would mean. Most writers agree, however, that particularly when we educate teachers for the rapidly changing, international world, technical competence is not enough. Teacher education should involve awareness of broader social and educational issues in addition to pedagogical skills (Bennett 1995; Noel 1995). Writers also state that issues like ethnocentrism, stereotypes, prejudices, racism, power, and minority oppression are seldom teacher education agendas. Teacher trainees very often also come from very secure backgrounds and have little understanding of the whole spectrum of society.

When assessing the international teacher education programmes, the same criteria as with any other teacher trainees can be used. In addition to that, however, students' results should meet special criteria. One of those special criteria is awareness of how our community and background affect us. In order to be able to see that, we must go beyond names and birthplaces to the factors that shape our beliefs, attitudes, values, and traditions. Understanding this helps us to be more open to the ideas and values from other cultures and not to see things as black and white. Cultural consciousness-raising is a process of bringing one's own culture to the level of awareness that makes it possible to perceive it as a potential bias in social interaction and in acquisition and transmission of skills and knowledge.

Another important criterion is developing intercultural competence where emphasis lies on informed empathy and dialogue. According to Bennett (1995, 263), intercultural competence includes intellectual and emotional commitment to the fundamental unity of all humans and, at the same time, accepts and appreciates the differences between individuals and cultures. Interculturally competent teachers are aware of the diversity in cultures, they know that culture is ever-changing, and they are conscious of the dangers of stereotyping and prejudices. At the same time, they know that if they ignore students' cultural attributes, they are likely to be guided by their own cultural lenses. Intercultural dialogue increases understanding of others, and through it we enrich our self-understanding by considering our beliefs, values, and actions from a fresh standpoint (Noel 1995, 268).

Bennett (1995, 263) distinguishes a third criterion for multicultural teacher education: to develop a commitment to combat racism, as well as sexism and all forms of prejudice and discrimination through development of understanding, attitudes and social action skills. She argues that acquiring multicultural literacy and appreciation of cultural diversity will not necessarily help teachers to put an end to racial prejudice, but emphasis should also be on clearing up racial myths and stereotypes that foster beliefs about the inferiority of different races and cultures. That should also include awareness of institutional and cultural racism in the world. Thus the ultimate goal of multicultural teacher education is to develop antiracist teachers.

Developing cultural awareness, intercultural competence and antiracism requires cultivation of intellect and attitudes, but also skills and courage. Teachers should learn to translate their philosophies and knowledge about cultural diversity and similarity into plans for use with students and in wider contexts where they work. A multicultural school and society needs teachers who are autonomous and courageous enough to tackle problems whenever they see injustice or inequality.

In this article, I have examined criteria for assessing international teacher education as the need for it has become actual with the special program at the Oulu Teacher Education Department. However, the suggested criteria must not be restricted to the special group. My argument is that teacher education should reconsider its ethnocentrism and evaluate what working in multicultural schools and an interdependent world requires from education and teacher education.

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Intercultural education as an integral part of the school curriculum and teacher education

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Abstract

Culture has to be seen as a collective system of values, norms, beliefs etc. as well as a very individual process of acquisition of the picture of the world. Intercultural education, based on the individual's first-acquired cultural system, tries to make him/her a multicultural person and to widen his/her picture of the world. The article discusses some viewpoints on intercultural education and learning in general, and presents experiences and results achieved in two experiments putting emphasis on intercultural experiences of preservice teachers and high school students. Finally, the paper connects the researcher's former works with a new research project, Learner, Curriculum and Culture Change, as a part of the research project Effectiveness of Teacher Education in Finland.

Key words: intercultural education, intercultural learning, culture experienced, intercultural competence, learner's picture of culture, teacher education

1. Introduction

The necessity of intercultural learning is commonly accepted as an essential goal of education at all institutional levels. It is therefore important to introduce elements of intercultural learning to preservice and in-service teacher education. I discuss the principles and the framework of my teaching experiments in this paper. We attempted to plan an experiential process of intercultural learning for teacher education and high school students. In every experiment an important aim was to get experiences of the educational outcomes of teaching cross-cultural themes and developing intercultural learner competence.

In the *OK school development project (1994–98), as part of the Effectiveness of Teacher Education in Finland* project, we are currently exploring ways of helping teachers to guide their learners' competence for intercultural learning. Effectiveness is to be understood in this article as a very flexible concept. It can mean different things depend-

ing on whether one adopts a pragmatic, a critical, or a hermeneutic frame of reference (Kramsch 1993, 236). As conceived objectively or scientifically, effectiveness is sometimes described in terms of a cause and effect relation: there is an input, and after certain processes, output results. This mechanical and simplified view has nothing to do with effectiveness as understood in this article. Effectiveness, a governing concept for the whole research program *Effectiveness of Teacher Education in Finland*, is to be understood as concerning learning in all its complexity: effectiveness in this in-service education project covers the qualitative evaluation of all the learning processes involved and their effects on teaching, learning and school development.

2. Perspectives on intercultural education

Intercultural education and intercultural learning are closely related pedagogical concepts which are concerned with the recognition and understanding of what happens when people of different cultures come into contact in one way or another. The former concept relates primarily to teaching, the latter to learning processes. Paige (1994, 3) notes that intercultural education differs from conventional approaches to education because it includes very personalized behavioral and affective learning, self-reflection and direct experience with cultural difference.

Intercultural learning may mean different things even within one and the same national culture. Naturally, therefore, it has been interpreted variously in different national cultures. In multicultural countries with a number of cultural minorities (native minorities, other older ethnic groups, immigrants or refugees), intercultural learning often aims at the integration of different cultures and at improving their quality of life together. In countries with a relatively homogeneous cultural background, like Finland, intercultural learning is principally concerned with the education of citizens towards internationalism or multiculturality. Accordingly, the idea of international education has been an integral part of the school curriculum in Finland. The concept *intercultural learning* is, however, a better one because of its explicit meaning of mutual or reciprocal understanding. Intercultural understanding always depends on the willingness of all participants to make their best effort in an intercultural encounter.

Intercultural learning always has to do with dissimilarity and foreignness. In intercultural encounters people have to tolerate foreign behavior. Fortunately, however, human beings have a natural, built-in tendency to be oriented towards the future. People anticipate other people's behavior wherever possible. This is manifest, for example, in the way people communicate in their mother tongue. They use totally automatized routines and rituals in their own communication (verbal and nonverbal), and understand with ease the routine discourse of other people of the same culture. The behavior of their partners in interaction is thus mostly predictable. However, in every encounter there are also many possibilities for misunderstanding. Representatives of the same national culture with the same language do not always understand the intentions of their communication partners.

For this reason, intercultural learning is an important concept even within the individual national community.

In all cultures, human growth towards tolerance of or the ability to cope with dissimilarity begins when the young child becomes aware of the family environment. But development into an "intercultural" person begins to take place when that person consciously starts to perceive and reflect on different behaviors and wants to learn about them. As we express ourselves very much through the language we use, personal growth towards becoming an intercultural person is not possible without encountering and learning a foreign language. Personal contact with a foreign culture and the study and use of the language of that culture are essential elements in intercultural learning. If this learning process can be directed so that the learner perceives behavioral and speech routines in foreign interaction and compares them with his own, it is possible for him to become conscious of his own behavior, and to understand that this behavior may seem just as strange to the foreigner. In this way it is possible to gradually attain an understanding of what things are taken for granted in the foreign and one's own behavior.

In order to increase predictability, every culture has a well-developed set of mechanisms for relating to foreigness. Among these mechanisms are stereotypes relating to foreign cultures and foreignness. Since stereotypes are formed early in the child's development and are thus deeply rooted, it is important to take them seriously (Schmitt 1989, 159). Understanding dissimilarity and foreignness presupposes that one is ready to problematize one's own stereotyped thinking. A consideration of stereotypes is thus a natural element in the process of intercultural learning and intercultural education. Is it possible to achieve this process of intercultural learning in the school or other educational institutions?

I will begin by attempting to explain my understanding of the factors underlying intercultural learning at a general level. I will then present some views and results arising out of my experiences with high school and teacher education students, which form a background for new investigations within the project Learner, curriculum and culture change. These ideas and assumptions concerning intercultural education will also constitute my starting point in the research project on the effectiveness of teacher education discussed from various perspectives in this volume.

3. The importance of intercultural learning

Many writers on intercultural learning and education (for example, Lustig & Koester 1993; Kramsch 1993; Sternecker 1992; Loenhoff 1992; Nestvogel 1991) have discussed the importance of intercultural understanding from different perspectives. Why is intercultural learning so important generally, and what imperatives for intercultural learning arise particularly out of our time and world situation?

First, the world will soon be intercultural in many ways, whether we like it or not. We have to live with the decisions made by the generations that came before us. We have in-

herited a world in which the national structures are dominated by a European, an American, an Asian or an African situation. We can hardly do anything about the national cultures in the different parts of these continents: they continue to develop in their own right. Second, in Europe we have far-reaching plans for the development of common institutions, intra-European and international collaboration, and ultimately European integration. Third, there are phenomena still evident in every culture that originate in ethnocentrism[1] and racism. If we wish to combat these phenomena, we have to understand their roots and attempt to curb their development. The situation in the former Yugoslavia and our inability to make well-judged decisions about such problems indicate just how serious the ethnocentrism and racism are. The fourth imperative for intercultural learning arises out of our common global problems with regard to pollution and overpopulation in the world. Without intercultural understanding it is difficult to see how it will be possible to come to terms with these problems. Much scepticism and resignation exists. But effective intercultural learning will surely give us better tools for working on these global problems. Fifth, the globe has become smaller as regards travel and communications. Travelling, studying, and working abroad, as well as international business, have all increased rapidly. There is a serious question of how and in what direction intercultural understanding will develop through all these intercultural encounters. Can intercultural understanding increase if people come together without being prepared for intercultural encounters and without reflecting on their own behaviors and their assumptions regarding foreign behaviors? Finally, intercultural learning is important to the growth of every individual in every culture. It seems clear that consciousness of one's own cultural background and behavioral traits deepens with knowledge of foreign culture and behaviors. We need something to help us examine our own automatized behavior patterns, and foreign behavior patterns and ways of communicating provide an excellent tool for this purpose.

4. Intercultural competence and obstacles to its development

Intercultural education aims to prepare learners for intercultural encounter situations, i.e., to make them competent to communicate and interact with representatives of other cultures. This means that the goal of intercultural education is the development of the learner's intercultural competence. What does it mean to say that someone has intercultural competence? What factors does intercultural competence involve? I will consider some essential properties of intercultural competence in the following (cf. Koester & Olebe 1988; Sternecker 1992; Lustig & Koester 1993)).

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[1] Ethnocentrism can be defined as the views of things in which one's own group is the center of everything, and all others are scaled and rated with reference to it (Lustig & Koester 1993, 277).

There are eight central abilities in intercultural competence that have a bearing on one's intercultural learning. These behaviors are in some respects common and important in all cultures. Logically enough, they are also more or less culture-specific depending on the way each culture teaches its members to exhibit these characteristics. All of these abilities or behaviours can certainly be taught to members of other cultures. Lustig and Koester describe these eight abilities as follows:

1. Display of respect	The ability to express respect and positive regard for another person
2. Interaction posture	The ability to respond to others in descriptive, nonevaluative, and nonjudgmental ways
3. Orientation to knowledge	The terms people use to explain themselves and their world
4. Empathy	The capacity to behave as if you understand the world as others do
5. Task role behavior	Behaviors that involve the initiation of ideas related to group problem-solving activities
6. Relational role behavior	Behaviors associated with interpersonal harmony and meditation
7. Interaction management	Skill in regulating conversations
8. Tolerance of ambiguity	The ability to react to new ambiguous situations with little visible discomfort

If we examine the abilities listed above, we notice that they are deeply connected with a person's inner world. To some extent they may involve cognitive learning and growth, but above all they relate to a person's emotions and social life skills. Because in intercultural encounters some (and perhaps all) of these abilities (task role behavior, relational role behavior and interaction management, for instance) are naturally influenced by one's own cultural patterns, the development of intercultural competence should take place as the result of a conscious cooperation of one's own cultural behavior and the foreign cultural behavior in such a way that affective and cognitive skills are linked.

There are several obstacles to intercultural learning and the development of intercultural competence. People are used to verbalizing their feelings, and it may therefore be useful to consider words connected with otherness, foreignness and dissimilarity: unknown, unpredictable, ambiguous, weird, mysterious, unexplained, exotic, unusual, unfamiliar, curious, novel, odd, outlandish, and strange (Lustig & Koester 1993, 276). By reading through this list of words, it is easy to understand how the choice of a particular word might reflect a particular attitude or emotion of the speaker.

People in every culture are used to processing so much different information that they have to simplify by selecting, organizing and reducing it into less complex forms (categories, groupings, patterns). It is characteristic of human beings to make simplifications of the behaviors of other people. Such simplification is especially effective where foreign behavior is concerned, because the information is often very limited. The characteristics of certain events, persons, or objects, once experienced, are often assumed to apply to all

other similar events, persons and objects. Sometimes these assumptions are true, but mostly only partly true and partly false. This human tendency to organize and simplify information is thus an obstacle to intercultural competence; it is manifest in stereotypes[2], prejudice[3], ethnocentrism and racism[4], and lack of knowledge and skills (cf. Kaikkonen 1993b, 33–39; Lustig & Koester 1993, 277–286). Stereotypes and prejudices are perhaps the most difficult and debatable among these from the point of view of how they originate and develop. It is not enough, for example, to describe stereotypes as positive or negative phenomena in the way stereotype research has often done. It is extremely important to see stereotypes as processes: as components and results of communication and construction, i.e., as semiotic models (Ertelt-Vieth 1993, 431–432). Ultimately it is necessary to direct attention to the lack of culture-dependent knowledge of communication, both linguistic and non-linguistic, that always hinders intercultural encounters and often leads to misunderstandings and confrontational situations between representatives of different cultures.

5. Some experiences of intercultural learning with teacher education students and high school pupils

This section describes experiences and results collected by the author in research projects and practical work carried out with teacher education students and pupils in a Finnish high school. The concept intercultural learning has been described as particularly concerned with foreign language learning and teaching, and the experiences presented here are based on teaching experiments in German and French.

The investigations led to the theoretical framework outlined below (Fig.1) of the *Widening of the picture of culture*, and to the conclusion that the basic task or goal of foreign language teaching is to *help learners to grow out of the shell of their mother tongue and their own culture*. Intercultural learning, in the case of foreign language learning and most likely in other learning situations too, is a process where the learner's picture of culture grows wider, increasing at the same time one's awareness of the foreign language and culture and consciousness of the special features of one's own cultural and linguistic behavior.

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2 Stereotyping is often understood as a selection process used to organize and simplify perceptions of others.

3 Prejudice refers to negative reactions to other people that are based on a lack of experience or firsthand knowledge.

4 Here the term covers three distinct levels of racism: individual, institutional and cultural.

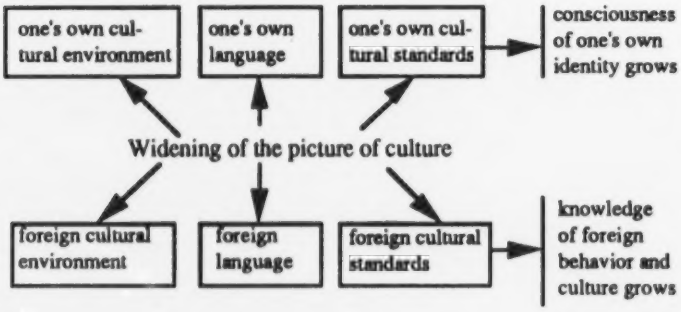
one's own cultural environment
one's own language
one's own cultural standards
consciousness of one's own identity grows
Widening of the picture of culture
foreign cultural environment
foreign language
foreign cultural standards
knowledge of foreign behavior and culture grows

Figure 1. Widening of the learner's picture of culture and its components

The first experiment was conducted with teacher education students majoring in German at Tampere University in 1989–91 (Kaikkonen 1991). The experiment *Culture Experienced* consisted of four stages: (1) a preliminary course in December 1989; (2) a seminar in spring 1990; (3) a stay in Germany (Berlin, Schleswig-Holstein and Hamburg) in May 1990; and (4) practical classroom experience as teacher education students at a Finnish comprehensive and high school in 1990–91.

The purpose of the project was to make clear to participants the differences between two cultures, to examine the role of prejudices, cliches and stereotypes, to illustrate the problems of generalizing knowledge which is culturally or nationally specific, and to set in motion an active process of perception and reflection in all those taking part. The idea was that the students as future teachers would in this way be better able to guide their own pupils towards intercultural communication and learning.

The most important result to emerge was that it was indeed possible for the experiment and the procedures involved to effect a change in the teacher education student's cultural awareness. Almost all participants felt that as a result of the course they better understood the significance of cultural awareness. In the follow-up year of teaching practice, all students emphasized the importance of one's own and the foreign culture for the learning of a foreign language, and they tried to make their pupils aware of aspects of the foreign culture. In this, contrastive procedures played an essential role.

As a result of these experiences, intercultural learning has been an integral part of teacher education in our department. In the early years of the project, a course on *intercultural learning through foreign language teaching* was given to foreign language teacher trainees. Now, voluntary courses are offered on intercultural learning and multiculturalism to all teacher education students. Trainees have also had more and more opportunities to develop their intercultural knowledge and experience at different levels of school and also abroad as part of an international teacher education student exchange program.

The second experiment involving intercultural learning at school level was the research project *Culture and Foreign Language Learning* carried out in collaboration with the Tampere University Department of Teacher Education and the high school Tampereen normaalikoulu (Kaikkonen 1993b and 1995). Pupils of 16–17 years of age studied German or French for two years with the cultural background of the language and its speakers an integral part of the studies. The two-year program comprised five theme-oriented courses (of 38 lessons each) which formed the framework for the study of language and culture. Throughout all five courses, very careful consideration was given to the learning material (texts, visuals and exercise materials); publishers' materials were used only when they were considered relevant.

The project aimed to problematize the pupils' own and the foreign behaviors, to sensitize the learners to foreign phenomena, to provide many-sided information about life in German and French society and to prepare them for intercultural encounters. In each course there was at least one visit to the classroom by a native speaker, and during the third course learners made a study trip to Germany or to France and received a visit from a German or French student group. All visits were based on a program of active study and living with foreign host families.

The learners knew a year in advance of the study trip abroad. It was therefore easy enough to get them to reflect on what it might be like to live in the foreign place they were to visit and ponder people's daily life in the foreign culture. The pupils were taught to make hypotheses about foreign phenomena so that they would have shared ideas of what they would seek to verify or falsify during their coming study trip. In short, the project aimed to promote a process that would guide the learners towards intercultural communication and intercultural learning through four stages as illustrated in the following figure (cf. Kaikkonen 1993b, 60–61):

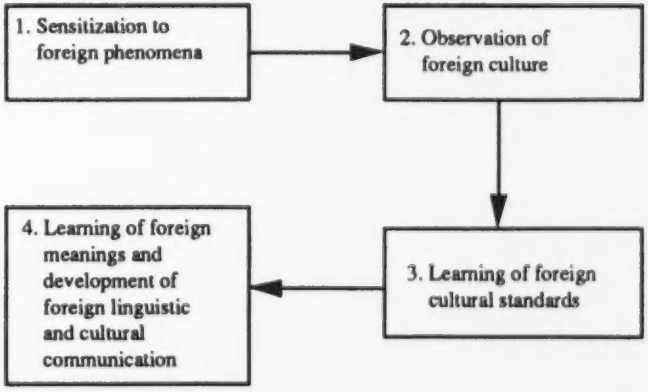
1. Sensitization to foreign phenomena
2. Observation of foreign culture
3. Learning of foreign cultural standards
4. Learning of foreign meanings and development of foreign linguistic and cultural communication

Figure 2. Four stages of intercultural learning in foreign language education

Both experimental groups also carried out a number of different culture-based school projects. These always related to certain themes such as living in the town or in the country, eating, travelling, visiting, shopping etc. The pupils worked in small groups, sought and evaluated information, interviewed each other, simulated foreign situations, and presented their own projects to the others. Sometimes, the projects also involved visits by a German or French native speaker to the classroom. Within the framework of their projects, the pupils designed a questionnaire for the pupils of the twin school and obtained in this way a lot of information from their foreign school friends on young people's very personal views on friendship, dating, falling in love, and other subjects. During the fifth course the pupils conducted an extended project in which each of them built up a foreign role. For this purpose they collected a lot of background material, shaped their role character's possible life, interviewed each other about their role character and wrote the curriculum vitae of their role character from three different viewpoints. When asked to evaluate the authenticity of the role characters thus created, native speakers regarded them as very credible.

In short, the two experimental years have shown that foreign language learning at school can promote intercultural learning in a significant way at least among pupils in the later teens. The pupils said that they had learned intercultural abilities of a kind normally ignored by traditional foreign language teaching. However, the experiment also demonstrated how difficult it is to change traditional conceptions of learning. In many cases, the pupils view of learning did not correspond to the conception they were being directed towards, involving growth towards learner autonomy and the idea that learning is not simply a cognitive process. Increasing intercultural competence is, after all, connected with affective rather than with cognitive abilities, as discussed above, and requires a kind of behavior that involves the whole person.

6. Intercultural learning in the project Learner, curriculum and culture change: some considerations on assessing its effectiveness

The research projects described above demonstrate a dramatic change in pupils' opinions on the importance of intercultural learning is unlikely to come about on the strength of one school subject. Rather, what is most needed is the integration of intercultural learning into the whole school curriculum; in other words, it is the responsibility of all subjects together.

The project *Learner, curriculum and culture change*, in which six different local schools in collaboration with the Department of Teacher Education at Tampere University are aiming to develop their school curricula, has good prospects of building up pupils' intercultural competence. All the participating schools consider intercultural learning an important goal of school education. Five of the schools have declared intercultural learning or multicultural education to be their main emphasis. It is worth point-

ing out in addition that one of the schools, Tampereen normaalikoulu, has already developed in this direction through its involvement in the earlier project *Culture and foreign language learning* (see above); intercultural learning is clearly the main emphasis in this school, which has created a wide international network of partner schools collaborating under a UNESCO program.

It will be very important to research in the coming years to see how the development of the school curriculum affects the learners' attitudes in relation to foreignness and dissimilarity, and how well it promotes their intercultural competence.

In addition, it is important that there should be researchers from outside investigating how effective learning and teaching have been. In accordance with principles for assessing the effectiveness of school-based in-service teacher training, the research project *Learner, curriculum and culture change* has undertaken to investigate the effectiveness of training and education at three levels: (1) The culture changes in the individual schools participating in the project, (2) the changes in the pedagogical thinking of the teachers, and (3) the development of the learners' learning outcomes in the course of the experiment (cf. Kohonen 1996 in this volume).

The research project is also an essential element in a wider research program, *Effectiveness of Teacher Education*. The effectiveness of work in the schools is ultimately evaluated according to how well pupils learn. Where intercultural learning is concerned, it is important to discover what kinds of intercultural competence the pupils have when they finish school. Without teachers who are understanding and prepared to work together, the multidimensional goals of intercultural learning can hardly be achieved. This is sufficient reason in itself for a long-term project lasting several years in which teachers will develop their personal, pedagogical and subject-oriented abilities in collaboration with education researchers and working within the project as researchers on their own work.

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Teacher education and gender

Vappu Sunnari, Oulu

Abstract

The main purpose of this article is to open the field of discussion on the question of gender and gendering in primary teacher education. The perspective is the effectiveness of the education. The field has been opened by a brief look at the beginning of the primary teacher education and by comparing some of its gendered foundings to primary teacher education in Oulu at the beginning of the 1990s. The core question is: Has primary teacher education produced and does it produce similar competence in female and male teachers?

Key words: gender, gendering, competence, historical and actual, female and male student teachers

1. Introduction

According to various statistics, Finnish women have a better average education than do Finnish men. Despite this, the working contribution of women, measured as monthly salaries, is only about three fourths that of men. It further appears that the higher the education, the bigger the salary difference (see, for example, Sunnari 1991). This is related to the problem of inequity between the sexes, but it also challenges us to ask what the qualities are which education produces, and we must ask whether institutional education is only partly meaningful from the perspective of professional competence or whether it gives different competence to men and women.

But although education seems to produce different levels of competence — measured in salaries — for men and women, there is education that does not seem to contain this problem. Primary teacher education is seen to be of this type. Primary teachers are considered to be a professional group with the same competence and salaries for both men and women. But does that education give similar competence and is its effectiveness the same for both sexes?

My aim is to study the question of the effectiveness of teacher education from the perspective of gender and of equality/equity. The core questions are if the education produces similar competencies for both sexes and if it gives competencies to promote equality/equity between the sexes. In addition, I study if the programs of the 1990s have produced something new in the area.

2. From gender to gendering: about the basic tools for analyzing teacher education from the perspective of gender

Central terms aimed to conceptualize the sex-based and -biased interpretations and actions are gender, gender system, gender contract and gendering (Connell 1987; Acker 1991; Lorber & Farrell 1991; Rantalaiho 1994).

The term "gender" has originally been taken into use to denote the distinction between 'biological' and 'social' in sex-based and -biased human development (Oldersma & Davis 1991). It refers to the understanding that in addition to the biological basis there are socially produced impressions of women and men which direct one's cultural context to grow up as a woman or as a man. One's sex is also supposed to have an influence on one's social position and status and on the actions which are considered to be normal, questionable or abnormal for men and women (Lorber 1991; Lorber & Farrell 1991; West & Zimmerman 1991). Lorber & Farrell (1991, 1) speak about genders. The pluralistic form refers to the fact that gender category is a historically and culturally changing category. Being a woman or being a man changes from one generation to the next and is different for different racial, ethnic, and religious groups, as well as for the members of different social classes (see also Ortner & Whitehead 1981; Cucchiari 1981).

Gender as a term, however, is a descriptive rather than an explanatory concept (Oldersma & Davis 1991). The terms "gender system" and "gender contract" are more explanatory by their nature. Liisa Rantalaiho (1994, 10) defines gender system as a concept implying a methodological understanding that gender is a stratified aspect of society and, in turn, organizes the world. The idea of stratification suggests that gender is assumed to be present simultaneously in the structural divisions of society and in its symbolic meanings and individual identities. Rantalaiho illustrates her definition as follows: "Women and men together and separately produce and reproduce the totality of human life and simultaneously the social and cultural structures as well as themselves and each other as sexual beings. The system, in turn, is a functional whole, which is not necessarily uniform or 'well organised', but may contain inherent contradictions, incoherencies and chronological disruptions" (Rantalaiho 1994, 10).

Rantalaiho (1994, 13) considers stratification an advantage of the gender system concept, because it allows the same tool to be used in an analysis of both the context of activity and the conditions of activity. Human beings as agents, however, are only included in an abstract sense, because the system views human beings through the totality and as

parts of this totality. Rantalaiho considers this a drawback of the concept. Gender contract is a concept that has been applied to analyze the activity and subjectivity of subjects on their own conditions (Rantalaiho 1994, 13).

The shaping of gender, or gendering, is supposed to happen through different processes. Creating differences between the sexes is supposed to be one of them, and there is quite a broad consensus about it as a fundamental gendering project (see Scott 1986; Hirdman 1988; Acker 1991). But it is not supposed to be the only one. For example, Joan Acker (1991, 167–168) distinguishes five interacting gendering projects. They are:

1. The construction of division along the lines of gender, division of labour, location, physical space, allowed behaviour, power etc.
2. The construction of symbols and images that explain, express, reinforce or sometimes oppose this division.
3. Interactions between women and men, women and women, men and men. As an illustration of these processes, Acker names differences in conversations, differences in interruptions, turn taking and setting the topic of discussion.
4. The production of gendered components of individual identity.[1]
5. Gender as implicated in the fundamental, on-going processes of creating and conceptualising social structures (Acker 1991, 167–168).

Yvonne Hirdman (1990) speaks about making and maintaining divisions, but also about setting up hierarchies and the crucial project of making and adopting gendering interpretations and actions. In this study I use the terms making and maintaining divisions/differences and hierarchies as tools when analyzing the issues.

3. A short look at the beginning of the primary teacher education from the perspective of gender

It was just over 130 years ago when public primary teacher education and about 130 years ago when public primary education began in Finland. One special question at that time was whether women need public education and whether they should be allowed to work outside the home. Thus it is very understandable that there were also passionate debates on the question of whether entrance to the teacher seminars should or should not be allowed to women. (See, for example, Snellman 1938 IV–VI; Cygnaeus 1910; Wilkama 1938.) Uno Cygnaeus, who is called 'the father' of Finnish primary teacher education, demanded that women have the possibility to enter the teacher seminar, but Johan W. Snellman was one of those who regarded the demand as questionable in part. He even proposed that for financial reasons, official primary education should initially be given only to boys.

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[1] As a product of these processes, for example, Lorber & Farrell use the term "gendered personality structures."

Primary teacher education and public primary schools, however, started at the same time for both sexes in one teacher education seminar in Jyväskylä, which was one of the first public vocational education forums for women in Finland. The basic aims of education were defined differently for women and men. The aim of educating men and boys was defined to be the education of courageous, brave and fearless citizens to defend the home and the native country. The principle aim of educating women was to make them into good and self-sacrificing mothers and homemakers (see The Statutes on Primary Schools 1866).

The social status of the women and the men who gained entrance to the seminar did vary: it was the women of the upper classes and the country men who entered (see Cygnaeus 1910a; Halila 1963). At the same time, this meant that most of the men were without prior schooling, whereas almost all of the women had girls' school as their prior education (see Raitio 1913; Halila 1963).

The teacher education program was built to last for four years. The institute was made a boarding school, and separate departments for male and female students were established. There was also a primary school, called 'a model school', in the seminar. The model school included an upper primary school, a lower primary school and a kindergarten. Some children of day-nursery age were included in the model school system, too. The lower school and the kindergarten were for children of ages five to nine, while the upper school was for children between ten and fifteen. In the school institution outside the seminar, the lower schools were not a part of the proper public school system financed by the state. Only the upper schools belonged to it. Lower education continued to be organized by the church.

There were lots of subjects to study in the seminar program. Mostly they were the same for the female and the male students. The amounts of their weekly contact work hours did differ a little, but not very much. Although the subjects studied were relatively similar, there were also some differences (see Halila 1949; Raitio 1913). Interesting — and, I think, illustrative — were the different emphases and resources in textile and technical work and in the aims of gymnastics and sports. Both of these groups of subjects were among those the special significance of which for culture and education was emphasized by Uno Cygnaeus. Cygnaeus wanted teaching of handicrafts to be included in the curricula of both the male and the female students. As for the women, this posed no problem, but including handicrafts in the curriculum of the male students aroused strong opposition. In the final curriculum there were handicrafts for both.

As to technical work, the Statutes on Primary Schools emphasized the development of technical skills and learning of how to use technical equipment. For textile work, the emphasis was on making various products which were listed in the Statutes. These products were meant for family life. The difference could also be seen in the resources for technical and textile work. Technical work was equipped from the very start — that is, in the 1860s — with a wide range of tools and implements, but textile work was not. For instance, the sewing machines which were used at the Jyväskylä seminar for textile work were still owned by private persons in the 1880s and 1890s. (See Halila 1949; Raitio 1913).

When planning the educational systems of primary education and primary teacher education, Cygnaeus talked, in connection with physical education and sports, specifically about educational gymnastics, the purpose of which was to contribute to the harmony of human growth, to eliminate sluggishness, which according to him was characteristic of the Finns, and to develop bravery and fearlessness in them. As to men's physical education, these objectives were realized through the emphasis on competitiveness, strength and quickness; as to women, the emphasis was on suppleness, rhythm and agility (see Cygnaeus 1910; The Statutes on Primary Schools 1866, Raitio 1913).

From the perspective of gender and of the actual discussions, there are some interesting additional details in the other subjects studied in the first realized study program. Physics was studied during the first seminar year only by female students (see Raitio 1913). This was not because of the differently aimed programs but maybe because of the different study histories and abilities of the female and the male students. And already during the first seminar year, the following points were discussed among the teaching staff:

- the male students progressed in their studies worse than the female students
- the examination time caused more stress on the female than on the male students
- the female students succeeded in their studies better than the male students (see Halila 1949).

In addition, other differences existed because of the different backgrounds. The female students had difficulties in Finnish and the male students in Swedish. However, the first female students may have also studied German as an additional language because of their special linguistic abilities (see Halila 1949).

The everyday seminar life outside the lessons differed considerably according to the sexes and so did the pedagogical tasks in the model school (see Statutes on Primary Schools 1866; Halila 1949). In principle, the school practice had similar contents for both sexes and was located in the last seminar year. But in addition to the proper primary school practice, there were practice periods in the day and night nursery and in the kindergarten. These periods were only for female students in order to educate them to be good at bringing up children. Work with the children in the kindergarten began for the women in the first study year and lasted throughout their education.

The sex- based differences in the seminar also included differences in the moral code and control. The female and the male students were taught separately from each other, and the female students especially had to be protected against immorality. The most obvious special arrangement to protect the morality of women was that when female students were taught by a male teacher, there had to be a female guardian in the room (see Cygnaeus 1860; Halila 1963).

As a whole, the most visible sex-based differences in the Jyväskylä seminar program were the following:

- the different background demands
- different aims in personal growth

- the division of the prospective teachers into teachers for young children and for older ones
- the everyday chores of the students
- the norm control.

In addition to these, there were differences in the contents of the subjects to be studied and also in the results of the studies. Most of the built-in differences of education were justified by the difference between the male and the female calling (see Cygnaeus 1910). In the work after education, the salaries of female teachers were smaller than those of male teachers.

4. Sex-based differences in the competence gained in primary teacher education in Oulu at the beginning of the 1990s

The history of popular teacher education has mainly been segregated education of the male and the female teachers but in principle in similar programs. In other words, the majority of the teacher seminars established in Finland have been either men's seminars or women's seminars, but their program has been based on the teaching program of the Jyväskylä seminar.

Formally, primary teacher education and the teacher education programs have been similar for men and women throughout the time that teacher education has been university-based; that means from the year 1974. In principle — and mainly — the female and the male students have studied in the same groups. For example, nowadays the Primary Teacher Education program in Oulu includes only one course, physical education, which is divided according to sex. But the groups have similar, integrated parts in their programs, and the lecturers of these two parts of the program work together. The students even exercise together. Earlier, and still in the last years of the 1980s, the technical and textile crafts were segregated according to sex, too.

But are the actual educational processes similar? If we look at the question from the perspective of student teachers' special competencies acquired through minor studies, it looks like as if there were a strong tendency to a sex-based choice of these studies.

I have analyzed the minor studies targets of the primary student teachers' who received their degree in the Department of Teacher Education in Oulu in the years 1988–1992, during the five years before the curricula in this primary teacher education department experienced a big change.[2]

During the years 1988–1992, 381 primary education students received their degree in the Department of Teacher Education in Oulu.[3] Women numbered 214, and there were 167 men.

At that time the students took almost without exception two minor subjects, each totaling 15 credits.[4] The most popular special competence acquired through minor subject studies was sports and physical education. This could be found in 148 final reports. It means that about 40% of the new teachers had specialized in sports. The second most common minor subject competence was in handicrafts (127 cases). Then came music, education of the first school years, drawing and special education. As to the most popular minor study competencies, the result is in line with some earlier, state-level results. But the trend to specialize in so-called practical subjects, in arts or in the education of the first school years seems to have been stronger in this case than on the state level at the beginning of the 1980s (see Figure 1 and Lahdes 1987).

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2 Limiting the years under observation is based on the aim of finding out at a later stage of the study whether the change in the degree program carried out in the 1990s, where attention was also paid to minor subject choices, brought any change in the matter in question. Actually, the changing process of the degree programs was started as early as the autumn semester 1991, and the changed degree program was used for the first study year in the autumn semester 1992, but one cannot suppose that this had any significance for the minor subject choices made by the students graduating by the end of 1992.)

3 The study includes only students graduated from the primary teacher education program, which means that those studying in the provisional education program or those completing their degree studies are not included in the calculations. This limitation has been made in order to standardize the study. There have been various provisional education programs during the various years whose students typically have completed quite a number of different studies before entering teacher education. These are not included in this study.

4 About 10% of the female graduates and 6% of the male graduates had a third or fourth minor subject.

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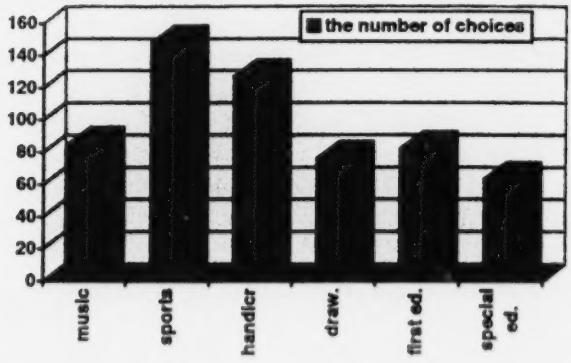

Figure 1. The six most popular minor subject choices made by graduates in the primary teacher education program of the University of Oulu, Department of Teacher Education in 1988–1992, measured in number of choices.

If you analyze the minor study choices so that you separate the choices according to the students' sex, the overview looks a little different (see Figure 2).

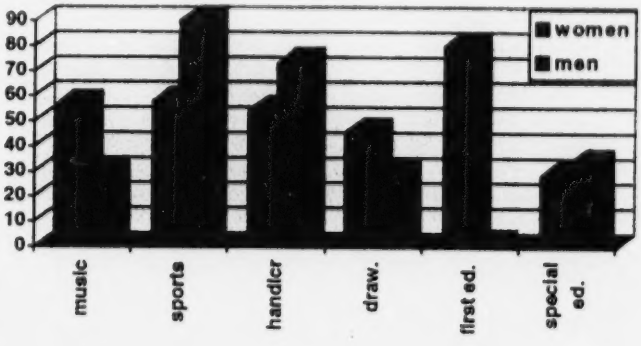

Figure 2. The most popular minor subject choices made by graduates in the primary teacher education program of the University of Oulu, Department of Teacher Education in 1988–1982, specified by sex.

As it appears from Figure 2, sports has been the absolutely most popular minor subject study choice among the male students with 54% of the male students specializing in it. The most usual pair for sports among the male students was technical handicrafts. The main reason the male students have given me about the choices is that sports and techni-

cal handicrafts are school subjects they have to teach in the future. However, as classroom teachers they have to teach the other subjects as well.

The distribution of choices made by female students was wider, and there was no subject which would have been as popular among the female students as sports was among the male students. The most popular choice among the female students was initial-stage education. There were 80 female students who had a mention of "the education of the first school years" in their final certificates (37%). The second most popular of minor study subjects among the female students was sports. Very significant from the perspective of gender is that only two male students had this subject as their minor study choice. When the male students chose a more child-centered minor study subject, they chose special education.

Humanities, foreign languages or mathematics and natural sciences were not among the most popular minor study choices, yet, some specialized in them. The amounts of the mentions of them in final reports during the years 1988–1992 is illustrated in Figure 3.

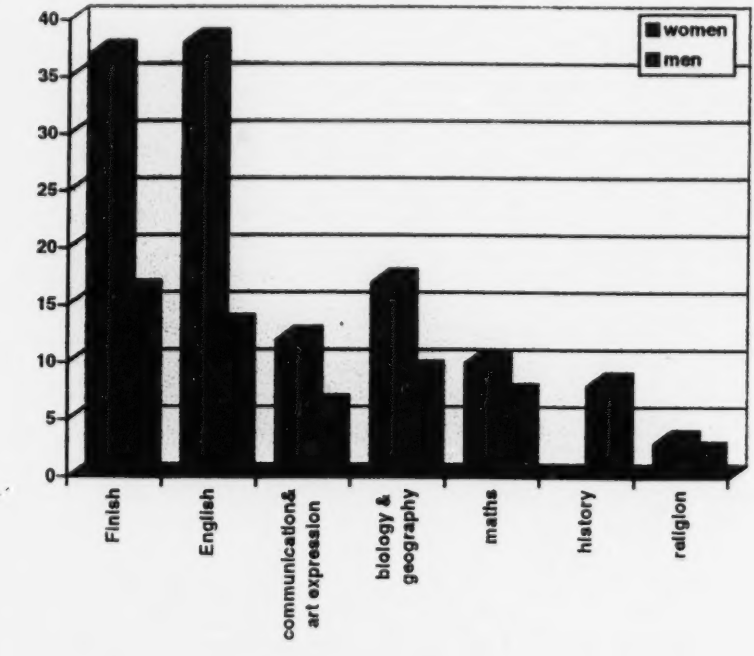

Figure 3. Minor subject competencies in humanities and tool subjects of students graduated from the primary teacher education program of the Oulu Department of Teacher Education in 1988–1992.

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The first-year course in biology was taken by 17 female and 9 male students, in English by 38 female and 13 male students, in Finnish language by 37 female and 16 male students, and mathematics by 10 female and 7 male students. As it appears from Table 3, the female graduates had more minor subject studies in all tool subjects and in humanities than the male graduates, with only one exception, history. Not one female student graduated from the primary teacher education program of the Oulu Department of Teacher Education during the years 1988–1992 had minor studies in history. It is possible that this has something to do with history as a subject to study. Besides, this obviously is related to the fact that history has been taught in Finland only starting from the two last classes of the lower primary school. A female student who is oriented to teaching pupils in the first classes does not necessarily feel that she needs to study history.

5. Discussion

If you analyze these minor subject competencies as a whole, you can see that there were quite big differences in the competence of the female and the male students and you can find similarities in these competence variations and in the competence variations of the primary teachers of the 1860s.

In analogy with the orientation of their colleagues of the 1860s, the female students of the 1980s seem to have been oriented more typically than the male students to be teachers of young schoolchildren. On the other hand, they were characterized by an attempt to acquire competencies in various subjects taught at school. The choices made by the male students were further oriented to exactly those subjects that are being taught segregated according to sex, that is, sports and handicrafts. These divisions date back to the 1860s. It is interesting that also the female students specializing in mathematics outnumbered the male students although quite common opinion is that there are the male students who in primary teacher education specialize it, if any.

Regarding hierarchies, it is self-evident that the first primary teacher education program produced male teachers who were higher in the social hierarchy than the female teachers, at least in the cases when the female teacher was teaching small children in the lower popular school. This is also interesting as a sociological question, because, as was mentioned in section 3, the families of the female student teachers were higher in social status than the families of the male student teachers.

From the part of the actual hierarchies the question is more complicated, if not including the questions of the heads into the study. However, this question is returned later. My aim is to further the study on the part of the special competencies by analyzing the minor study competencies gained in the primary teacher education in Oulu in the years 1992–1995 and the minor study choices made in the years 1994–1995. In addition, my aim is to compare the results with the corresponding issues from Hämeenlinna and Joensuu and with the competencies which were required in the job advertisements for primary teachers during the time 1.1.–31.7.1996. Using some cases, I shall then analyze new primary

teachers' special competencies in use. The question of whether the primary teacher education provides tools to promote equality between the sexes is also a target of my further study.

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Analyzing and evaluating student teachers' developmental process from the point of self-study

Sinikka Ojanen, Savonlinna

Abstract

The central task of professional education is to bring practising professionals into contact with new knowledge and ideas. That is updating but it also stimulates critical thinking and self-evaluation. The introjection of new knowledge is an idea more easily said than done. What we need is to understand theoretically the mechanism of professional change (comp. Feiman & Floden 1980). The basic question in the paper is what does it mean when students enter personal and professional developmental process or how to start processing knowledge in a reflective way? In the writing the development of one's own practical theory is theortically analyzed, as well the consciousness of oneself as a prerequisite to change and the methods or models, how to carry out one's self-evaluation.

Key words: generating pedagogical knowledge, self-study and self-evaluation, professional development as gradual change

1. Introduction

There has been a profound demand for the renewal of teacher education programs in the last ten years, also in Finland. To get students to reflect should become the programatic goal in Teacher Education (Valli 1992). The group which first joined together the reform teaching and teacher education, decided in 1990 to create Professional Development Schools (PDS) as the central vehicle for their reform efforts. We could also speak of Reflective Practice Movement, within which the concept of reflective teaching includes a commitment by teacher educators to help students internalize and take responsibility for their professional development (Korthagen 1993). The literature abounds with calls for reflective practice to be fostered at the preservice level of Teacher Education and encouraged as a career-long pursuit (e.g. Cole 1989; Wildman et al. 1990).

Although reflectivity and the reflection process are very well known concepts in modern education, the idea of professional learning during preservice and afterwards that has been underconceptualized and little examined, even empirical studies are limited! Traditionally student's personal progress in her/his studies and professional growth as well as self-assessment have fallen upon her/him. Preservice teachers are still not encouraged e.g. to take external experiences into account, to reflect upon them and to re-interpret and re-evaluate them as an integral vision of self (compare Knowles, Holt-Reynolds, 1991). Facilitating student teachers' growth process is a concept newly provided by constructive learning theory. In this respect we would need re-evalutation on the teaching provided.

2. The problem of research

The central task of professional education is to bring practising professionals into contact with new knowledge and ideas. That is updating but it also stimulates critical thinking and self-evaluation. The introjection of new knowledge is an idea more easily said than done. What we need is to 1) understand theoretically the mechanism of professional change (comp. Feiman & Floden 1980), i.e. what does it mean when students enter personal and professional developmental process or how to start processing knowledge in a reflective way? Briefly, it means gradually, through hard work and courageous commitment, reaching quality education in order to construct one's own theory and professional knowledge about education, i.e. to get the new knowledge transformed to their personal self-knowledge and behaviour.

2) The second central problem in developing professional expertise and professional practice is to continuously ask how this process should be evaluated in order to foster and strengthen it? The purpose of this article is to answer indirectly — not didactically — to these two questions: the professional learning process and its self-evaluation with respect to understanding what it means to be a teacher in a broader sense, based on literature and on the empirical long-term research carried out continuously in our Teacher Education institution.

3. What does it mean to reflect in practice? (A theoretical overview)

The effect of professional development upon classroom teaching is governed by a number of factors, the central one being the ability of teachers to be reflective about their practice (Clarke 1995).

The concept of reflection and the process are widely discussed in literature. Reflective teachers are involved professionals, who constantly seek new ways to get their students involved, too. (Henderson 1992.) The popularity of the concept "reflection" is

based on the fact that it highlights in the student such characteristics which are considered to increase intrapsychological, internal growth. Thus reflective action emphasizes the adopting of a critical and conscious relation as the guiding light in one's teaching. Reflective practice is a powerful tool. When students learn to reflect upon the origin, meaning and consequences of their actions the change that takes place in the learners' behavior and reflective practice becomes an integrated way of thinking.

The crucial aspect in all kinds of education is to learn to use one's personal experience or the skill of reflecting on the experience. The concept of reflection is about finding out about the material which will resolve the doubt and stimulate continuous construction of meaning. Critical thinking and reflection are actually synonymous to in-depth thinking, which includes the acceptance of a problem, the endurance of anxiety caused by a long period of work until you have the knowledge needed and the recapitulation, as well as the re-interpretation of that problem based on new data (Ojanen 1993). This usually incorporates doubts, amazement and attitudes towards prolonging decision-making.

Noddings (1984) describes reflective teachers in the following way:

- They take the time to have a dialogue with others — also with oneself, within inner speech.
- They work co-operatively.
- They facilitate each individual to discover his/her best self.

It also means becoming sensitive to one's own best self, listening to a deeper part of oneself. On the other hand the remarkable perception is that: the students' own personal experiences do not suffice when preparing them for a wide range of future situations. Acquiring insight needs to be systematically encouraged, similarly time and space to do it should be allowed, because it is a hard task to accomplish.

When we speak about reflective practice we do not reject the concept of professional knowledge. On the contrary, reflective teachers are knowledgeable, but their knowledge base is personalized, self-constructed and ever-expanding. They try to make sense of certain situations. According to Henderson (1992): As a reflective student you need to ask yourself two questions:

- What is the relationship between what I am trying to learn and my own past experiences?
- What is the relationship between what I am trying to learn and my personal purposes?

Constructivist research on learning focuses on how students become students of their own teaching, how they e.g. create knowledge in a reflective way by relating their past experiences and personal purposes to the subjects they are studying. This kind of research examines the individual and social construction of meanings.

A teacher education program may include strategies and components which are claimed to stimulate and promote reflection, as well as evaluate reflectivity (compare e.g. La Boskey) — such are for instance ethnography, journal writing, ethnographic studies, case studies, microteaching, structured curriculum tasks (Ben-Perez 1984; Smith 1991),

the structured study of classrooms through action research etc., biography, story telling, writing and teacher interview. Through the use of these and other similar activities, pre-service teachers are supposed to **gain new understanding of themselves** as professionals (Pugach 1990). Henderson (1992) suggests: providing them with avenues to bring them into classroom creative writing, for example, gives students opportunity to talk about themselves and to integrate student's life experiences into the classroom. However, reflected tools should be extended to selfstudy i.e. inquiry processes, to make sense of students' life and work as professionals!

4. Development of professional, personal knowledge and practical theory (an analysis of concepts)

The main concepts used in this paper are: personal pedagogical knowledge (ie. professional knowledge or content knowledge), including conceptual knowledge and metacognitive knowledge, secondly professional development and thirdly self evaluation. The above-mentioned concepts constitute a major part of the developmental process of a teacher here. The lack of attention to the uncovering of professional personal (pedagogical) knowledge base leads to a very instrumental concern, which is contradictory to the reflective methodology. According to Kennedy the central problem in learning professional knowledge is how to help the student to distinguish the relationship between the general principle and the individual, practical incident. Knowledge must always be placed within a context, and understood in relation to something. Shulman (1987) categorises "content knowledge", which in a wider perspective stands for the integration of subjective knowledge and the common pedagogical knowledge in a spefific situation. This constitutes the understanding of professional knowledge, (introjection). It can be seen as internalized knowledge, how problems are adopted and organized to be dealt to students. Expertise as a concious, deliberate action always indicates the interactive relationship between analysis and action. There is a distinct difference between habit and scientific understanding.

Generating **personal pedagogical knowledge** (or theories-in-use), which is also called one's own practical theory e.g. Handal (1990), is the area which we see connected with the topic: "becoming a teacher". It is not only the knowledge of content or structure, but the knowledge which arises out of the personal experiences and intents, providing patterns that are meaningful to oneself. This so-called practical knowledge is experientially informed by the knowledge of the subject matter, but álso by the knowledge of other areas, such as personal experiences, "turned" into learning. Elbaz (1983) proved, that teachers store and use their knowledge in different ways. We should realize the complexities of creating personal pedagogical knowledge

1. **Metacognitive knowledge** includes: intent plan and goal, which guide the learning process, metacognitive strategies, awareness and the personal knowledge of oneself as a learner.

2. **Construction** is the bridge between prior knowledge and the on-going process i.e. between the known and the not yet known or what has to be known.
3. **Conceptual knowledge** includes: content, subject-matter and discipline. Alexander et al. (1991) argue, that after arriving at conceptual knowledge, the implicit knowledge, also routines etc., will change into explicit (= articulated).

Professional development is described as gradual changes in behavior, knowledge, image, beliefs or perceptions of student teachers. In 1990s it is no longer a privately pursued extra, but a publicly implied part of teacher's regular working life (Day 1993). Professional development requires the systematic reflection on one's own personal theory. Insights regarding these processes would be valuable to teacher educators for promoting the professional development of preservice teachers. Understanding the relation e.g. between personal knowledge and the public theories constitutes a great problem in teacher education. We could summarize that the essential feature for the development of pedagogical knowledge is the teacher's committement to professional development and growth. Professional development is most dynamic when the personal committement to change is strong. Thus professional development leads to changes in cognitive concepts such as memory, perception and thoughts.

Self-evaluation is not necessarily **self-study**, which is seen here as a key concept. The educational literature consists of several concepts that connote self-examination, as self-perception, prominent in the 1950-60's, self assessment and self-rating, from the competency conscious 1970's and self-reflection, a return to Dewey in the 1980's (McLaughlin 1991). Self evaluation requires qualitative judgements about one's thoughts and behaviour. There is a difference between the atomistic approach exemplified by self-ratings and the engagement in systematic self-reflection. The self-evaluation is seen as an aspect or as one level of self-reflection (see also van Manen 1977). In self-evaluation students are 1) establishing criteria for success, 2) making decisions concerning the criteria, 3) analyzing their actions afterwards and 4) re-interpreting the consequences of their actions or past events. Such re-interpretation requires open-mindedness and observational skills, which enhance reflection and also aid self-evaluation (Laughlin 1991).

5. Learning to understand the development of one's own practical theory (i.e. theories-in-use)

An prescriptive approach to teaching is in fundamental conflict with the realities of teaching of today in a modern society. Teaching practice is only to a modest degree a rational process even if the rationalistic approach in context of behaviourism and teacher's thinking has been viewed up to these days as a general theory of teaching practice. It is time to reconsider preservice students' practical theory as one essential aspect of teaching practice.

Although many areas of professional knowledge are dependent on some understanding of public codified knowledge found in books etc., professional knowledge is mainly constructed through experience and its nature is dependent on the cumulative acquisition, selection and interpretation of that experience. The first challenge in self-questioning is to learn to understand the development of one's own practical theory. Knowledge is not only book knowledge, which is available in codified form (Eraut 1994). Book knowledge means the limited awareness of the nature and extent preservice students have developed their personal knowledge, their own practical theory. Theory is always implicit in practical action knowledge. When the formation of knowledge is verbal, the link between action and thought, which normally are interconnected, has been severed (Dewey 1933).

Knowledge is the result of learning but the various educational strategies affect the learner in different ways. Professional knowledge cannot be characterized in a manner that is independent of how it is learned and used. Only when a strategy functions so that knowledge "becomes alive", can growth and change be expected. The significance of the strategy of education depends on the degree to which it can enchance or boost the ongoing off-course learning process beyond its boundaries. (Eraut 1994.)

Reflective practice has helped educators to understand their own behaviour as well as the ideas, presumptions and beliefs that people have, simply as a part of their own practical theory. Thus reflective practice can be seen as a development strategy which enables a change in teachers' professional development. This research oriented attitude towards work arises from the belief that the school organization and society won't change unless the employee changes. In order to change, the employee has to become aware of his/her own behaviour i.e. to make his/her unknown assumptions conscious. The regularity in behaviour i.e. acting in the habitual way is a force working against the change. Instead, the key for behavioural change is in the following:

1. understanding the mechanism of these two kinds of personal theories, espoused theories and practical theory (theories-in-use);
2. the dissatisfaction with unbalanced relation between one's own goals or intentions and personal fullfillment (i.e. practice).

As the individual starts to comprehend his/her practical theory and its conlicting nature in relation to his/her goals and action, a change in motivation usually follows. The change in practice is a consequence of stopping and realizing the disproportion. That the new information replaces the existing theory is what we believe to happen in all education, when new information reaches the learner. In reality, our behaviour remains unchanged eventhough we are delighted by the new information that we are being offered. New information easily stimulates listeners without really contributing to any changes in their actual behavior, as does deeply ingrained practical theory, i.e. action.

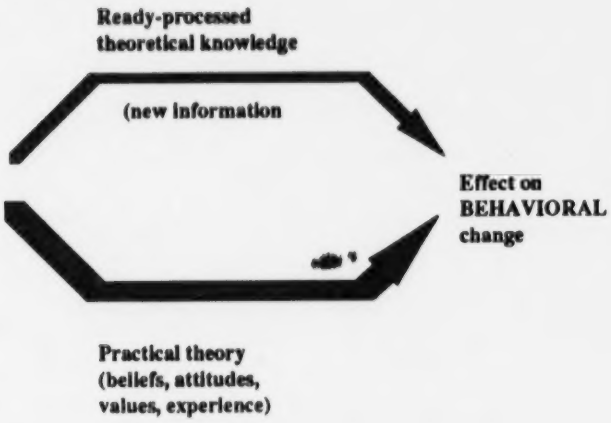

Figure 1. Factors affecting behavioral change

Why is it so difficult to change behavior on the basis of theoretical (ready-made) knowledge?

The answer is simply that people are not aware of their practical theories and thus fail to see the connection between their attitudes and actions. In consequence they have not personalized the new knowledge i.e. made it "their own".

Another crucial reason for the difficulties in changing behavior are the long cultural roots of the practical theory starting from early childhood interaction. It includes values and experiences which have been processed over a long period of time, eventually, into behaviour. These are unconscious and self-evident assumptions and actions. They are not interpreted, they work as such. They are the basis of individual behavior.

Practical theories are hard to reach or even out of reach, they are difficult to identify and yet they have a far greater influence on the way we act than the ready-made knowledge (= espoused theories) we receive. The knowledge offered to us through espoused theories represents another personal theory, which is conscious and easily changeable on the level of attitudes but in reality it has only marginal effect on our behaviour. (Kottkamp 1990.)

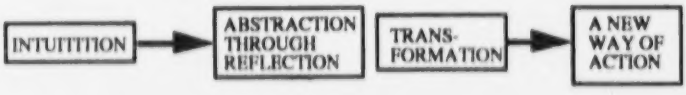

Figure 2. The process of development and change

Sinikka Ojanen

6. Learning to understand the process of development and change

What factors affect the transformation process of the knowledge? Transformation means a change in form. In fact it is the process: **from intuition — via abstraction — to transformation**, which is similar to the process of discovery and abstraction of the infant mind (Bion 1962).

It is sometimes difficult to see that personal professional development includes the same elements and proceeds in a similar manner as child's holistic development. These rules are typical for human developmental history in the field of psychological development. To increase the understanding of the phenomenon of learning process and professional growth, an in-depth research of child's developmental process should be made in order to recreate the circumstances and prerequisites necessary for the process. Acquiring knowledge and using knowledge are not at all separate processes but in fact the same process. What is the key element in both ones? Is the fact that the process of using knowledge as well as of acquiring (= the learning) process in general transform that knowledge, so that it is not the same knowledge they were taught. This issue can be studied from various points of view: the point of view of the individual, or of the group or e.g. the student–teacher-relationship with reference to the reflection of the learning situation or the curriculum.

The consciousness of oneself — the prerequisite to change

The process of becoming conscious is crucial in adult development. Growth is considered to have taken place when behaviour changes. When a professional has internalized knowledge, the process of development produces a new form of action and behaviour. In fact, partial realization is evident throughout the reflection process. Conceptualization is also needed so that the subject matter can be understood on a deeper level to enable transformation.

Through developing a more coherent understanding of what it means to become and to be a teacher in the broadest sense, it becomes possible to encourage and foster these circumstances affecting teachers to transform their work (Smith 1989). This issue is seldom discussed in the literature of evaluation. Perhaps it has been too problematic to the evaluators themselves. In fact, there is a question of self-examination and self-awareness on an in-depth level. The awakening of consciousness means e.g. that the learner begins to create a new conception of him/herself, which is never an easy task. The cognisance proceeds as wave motion, increasing and decreasing. Shortly before moving on to the next stage one experiences confusion and embarrassment (compare Schön 1987). The stages of the process are consecutive but also simultaneous. One's earlier openmindedness suddenly appears restricted.

Self-awareness — and the process through which it is achieved

Awareness is not necessarily a homogenous entity. The awareness is a feeling of being increasingly in touch with oneself, one's own person and thus better capable of understanding other people (Ojanen 1993).

Self-awareness is achieved through two processes: Self-knowledge is acquired through reflection and adequate feed-back. Self-knowledge is a wider term, including knowledge of one's own knowledge, also of how to use it and how to re-organize knowledge for easy retrieval (Eraut 1994).

People usually realize growth and change in retrospect. This strategy is used e.g. in Finnish supervision. The teacher notices that he/she thinks and acts differently, reacts in a new way to other people and accepts him/herself as well as being less defensive and anxious. Thus energy is not wasted on defence but freed for studying new things (Ojanen & Keskiluopa 1995).

In preservice teachers' development also means qualitative changes in cognitive functions, patterns of thinking, concept of knowledge etc. and likewise, in how all this is reflected in teaching, the relation to the subject taught among other things. The intellectual element becomes involved when the idea is being processed. Processing knowledge means that the original knowledge is "corrected" and expanded.

Teachers who are well oriented, e.g. towards a particular content, may still differ widely on what this understanding should look like. The personality can change, develop and reshape if this process is given a possibility in education by helping teachers or students to help themselves. The problem and solution become perfected at the same time (Dewey 1938). In supervision it is often to be seen that when the unconscious is recognized it produces an awareness both in the tutor and the tutored. It is important to find out that even when the truth may be ultimately accessible, it may not be directly and immediately known to everyone.

As a matter of fact it is a question of transformation and growth by aid of reflection versus a steady, static state. The problematic question is: how to get the prospective professionals to inquire themselves? The answer to that could be: to realize experience with the help of reflection. It will lead to awareness and understanding. Educative experiences processed make development possible. All teachers' task is to nurture the interaction between internal and external features to make the learning situation educational. The problem in teaching, even in teacher education, has been that the internal factors have been ignored. All in all, the role of inquiry as a pedagogical tool is easily forgotten in the professional development of a teacher as well as in the evaluation process.

The levels of consciousness

There are three levels of consciousness which differ in quality (Kolb): 1. **Registrative**, 2. **Interpretive** and 3. **Intergrative**.

According Kolb, learning is directed from the introspectiveness towards independent realization, self-control and anticipation.

An experience on the **registrative level** is limited to concrete feelings and each phenomenon is studied separately, producing a feeling of oneself as an operator.

The experience on the **interpretive level** deals with the process of assessment. The interpretation rechanges the process by adding to it some abstract–symbolic-dimension, the consideration of the meaning of the concept. The learning process gets the purpose within the dialogue of the conscious and subconscious understanding.

On **integrative level** exists a creative and personal relation with the experience. Then we move to the phenomena, to which we are personally related. Learning gets the fourth dimension, transforming experiences through intention. The integrative consciousness is synthetic; its sets separate experiences to the context, by the means of which it can define them again.

7. Some models of internal evaluation

In the following will be briefly described six strategies as a cue, where to find knowledge of promoting and improving self-study.

1) professional reflective inquiry	interaction of two colleagues
2) dialogical technique of critical friend	
3) structured dialogue	interaction of two colleagues
4) "shared reflection", called in Finnish "työnohjaus" (work guidance)	small group technique
5) large group technique	small group technique
	large group technique

Self-evaluation is an integral part of an evaluation process. Action is not merely enough for the learner. Each professional is expected to clearly evaluate his/her work. New things have not always been sought realistic grounds for. This makes the evaluation of the reflection ability difficult and strenuous. A significant part of professionalism is carrying the burden of responsibility. It also includes the responsibility for the modes of action and the methods used (Leiper 1994). Whichever the self-evaluation method chosen may be, it should be internalized and incorporated into action, so that it would support the experiential learning culture. Not until then does self-evaluation become **self-study** (or inquiry), which is the topic discussed in this paper.

Values need to be deliberated upon. To be able to utilize all the experiential elements of growth, the individual requires both activity (= experiment) and passiveness, facing the consequences (Dewey 1938), through which learning takes place i.e. togetherness of experience and thought in one's head. Russel (1988) as well as Calderhead have reported that the **image** a teacher holds of the relationship between theory and practice, can significantly influence the understanding of the personal learning process at every stage in

one's development of the professional knowledge of teaching. By critically assessing past and present models of thought we can develop the basis, on which information and different tasks will be processed.

1) The framework of **reflective inquiry** e.g. with close colleagues (Knowles and Cole 1994) is based on certain assumption about professional practice and development. Knowles and Cole describe honestly:

> "Becoming a teacher is a life-long process of continuing growth rooted in the personal. It is an on-going process of interaction and interpretation of elements, conditions, opportunities and events that take place throughout our lives, in all realms of existence — intellectual, physical, psychological, spiritual, political and social."

The researchers mentioned above situate professional **self-study** (inquiry) clearly in the context of personal histories. Secondly they believe that professional development is facilitated by opportunities for on-going critical reflection and inquiry into the broad spectrum of experiences that influence professional lives. "Thus our studies of ourselves", say Knowles and Cole "take place through dialogues in different forms of conversation". This kind of self-study is done through various methods. Central in becoming a teacher is to acknowledge the personal and holistic, integrative nature of subject matter (Knowles & Cole 1994).

2) An almost parallel idea, Knowles and Cole describe as colleagues, arises from the Sydney study (Smith & Hutton) as a **dialogic technique of critical friend**. They suggest that a powerful strategy for fostering reflective action is to engage with another person in a way which encourages talking with questioning, confrontation with trusted others. This dialogic reflection technique both provides a very safe environment within the self-study and evaluation can take place. However in the company of a peer it creates an opportunity for voicing one's own thinking and at the same time being heard in a constructive critical way (Smith et al. 1992).

3) Sharing closely and collaboratively one's own philosophy and practice as a **"structured dialogue"** within a small group of peer students teachers — is the method to which Pugach (1990) refers. This kind of a method develops a new pattern of teaching and approach to the complex environment of teaching as a whole. It enables teachers to step back from the creative ways of problematic classroom dynamics and consider alternative instructional and management choices in the classroom (Pugach 1990).

4) If we think of reflection as a goal of Teacher Education and reflection as an overriding responsibility (Tom 1984), we should concern ourselves with strategies which might lead preservice teachers systematically to reflective thinking and onto the acquisition of metacognitive strategies. This is possible through self-questioning in a guided learning situation and training to which Pugach also refers, as well as Schön, speaking of reframing the nature of problems.

As a matter of fact, the strategy Pugach describes has been used in Finland in teachers' in-service courses during the last 20–25 years as the method of shared reflection called "työnohjaus" or "work guidance" of teachers (developed for teachers by Ojanen

1985). The same four steps that make up Pugach's peer collaboration process are included in the Finnish in-service strategy called work guidance.

1. discussing and clarifying problems of practice by self-questioning in a guided learning situation (of 100 minutes), a strategy in which particular questions or hypotheses are posed and responded to as a means of reframing the nature of those problems in shared reflection;
2. generating possible solutions and visions and predicting what might happen should they be utilized;
3. summarizing the redefined problem, which is made by the educated supervisor of the group;
4. considering various ways of evaluating the effectiveness of the solution chosen, for instance, after half a year.
5. **The large group technique** includes the expeditions to one's own mind (Ojanen, Keski-Luopa 1995). Experiential learning is gaining growing attention in the educational literature, but understanding the experiential process has not become common. It is a process in which experience is reflected upon and translated into concepts which become guidelines for new experiences. In ESREA-report examines in detail how the progress during a 2-hour Large group proceeded and what was learned also in two Small group sessions immediately thereafter. This method is enormously enhanced and reflective towards awareness. This process opens the channels for learning very quickly. That's why the effect of the large group on human behaviour is a strong one.

8. The summing up

The main idea above has been to help preservice teachers to gain new understanding of themselves as professionals as well as awareness of their teaching acts

1) to be able to perform given tasks and
2) to learn from them.

Everyone needs professional growth opportunities — it is a normal and essential part for all members of the organization. Reflective practice is based 1) firstly on the assumption that all professionals want professional growth opportunities and want to change, in order to experience themselves as effective professionals 2) secondly it is based on the assumption that changes are linked with a growing awareness about one's performance, e.g. of the discrepancy between espoused theories and practical theory.

Are we witholding critical information? At least I would like to argue that the TE programmes at universities are lacking in elementary self-knowledge needed for effective performance. If the preservice students supportedly begin a conscious process of reflective development, they start to assess or evaluate the matters and effects of their observable behavior. This opens a new viewpoint and directs their life to a different track. They learn to know their practical theory — theory at a tacit level even they have no words to express it at the very beginning. That's why new kinds of platforms to systematic self-study and dialogue as a training method are needed.

In Teacher Education we have continuosly been asking: How to get preservice teachers to examine and develop metacognitive skills, e.g. critical self-monitoring of one's teaching and to engage in classroom routine being aware or concerned with the relationship to students. In that, self-study may hold a promise. Through that they are capable of making explicit and external those ideas, knowledge and beliefs they have internalized. The self-study is a part of on-going professional self-development which needs support, facilitating & encouragement and time, also teaching. Self-study work is just one form and part of reflective practice. It is analytic reflection to which an ascent of a kind of analytic awareness is needed. It means a capapility of abstracting aspects of concrete situations and particularly seeing these aspects in relation to each other (Calgren et al. 1994).

After having studied one's own practice and reflected upon one's own work, the teacher will be able to explain his/her practical theory and the factors "what and how", that are guiding his/her behaviour. What they learn through these things is likely to have a larger impact on their professional practice than anything else in their programme, because the focus is in self-learning rather than in the learning of things. The portrait of reflective professional development is totally different from that of the traditional outside expert.

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Student teachers' personal development during teacher education in the light of self-assessment

Tuula Laine, Hämeenlinna

Abstract

In this article I describe how students' professional development is interrelated to their human environment during teacher education. It deals with teacher socialization and the professional identity formation of a teacher. I also select some teacher expertise studies to show how important it is to a teacher to be able to cope with the human environment. Self-assessment methods are introduced as a tool of data gathering. In addition to this I try to describe empirically the professional identity formation of a student by using a brief case study example from my ongoing study.

1. Introduction

Teacher education is the only way to become qualified for permission to work as a teacher. After teacher education, the new teacher should be able to independently and autonomously manage in a teaching position. He/she should then have the skills and the responsibility that are expected. I think teacher education has much to do to help him/her to grow and develop to meet the demanding duties. Pedagogical and subject knowledge is easy to gain, but development at a personal level is quite different. As Cole (1990, 218) says, "Teacher knowledge, like teaching practise, is personal, complex, and content dependent. How teachers understand and go about their work is a function of who they are, what they believe in, what conceptions they hold, what they aspire to, and the nature of the environment they work and interact in."

In this article I deal with teacher development in the human environment of teacher education. This perspective is hermeneutic-phenomenological and is, in this case, concerned with human interaction and experiences in the teacher education environment. It is only one, but a very neglected, part of educational research. In teacher education we must continuously assess the quality of our work and the consequences it promotes.

Quality is a very many-sided phenomenon, and for its assessment, it is necessary to analyze what quality is in teacher performance. In this article I take into consideration the interactive capabilities of a teacher and how to develop these skills, because teaching is based on them. The recent research on expert teaching confirms this. Self-evaluation skills, self-reflection and skills of self-steering are powerful developmental factors, too, when they are used actively. In this article I also take into consideration the importance of the human environment to teachers' professional identity formation.

Teacher career development deals with changes that teachers experience throughout their careers in: (a) *job skills, knowledge and behaviors* in such areas as teaching methods, discipline techniques, curriculum, lesson plans, rules and procedures, and relationships with students, colleagues, supervisors, parents, and other members of the school community; (b) *attitudes, expectations, and concerns* in such areas as attitudes towards self and others, images of teaching, professional confidence and maturity, commitment to teaching, and satisfactions, beliefs, and concerns; and (c) *job events*. To understand teacher development, it is important to understand the interaction of physiological, psychological and social aspects of human development (Burden 1990, 311–314). These experiences are different and so are teachers. Supporting teacher development means supporting it individually.

Teachers' epistemological and metaphysical beliefs about the nature of inquiry, the construction of new knowledge, and judgments about reality can influence what and how they learn from teacher education courses. (Pintrich 1990, 849; see also Niemi & Kohonen 1995, 16). Teachers' knowledge about themselves is important to consider in relation to their content knowledge and their actual behavior. Pintrich (1990, 839) suggests that teachers must have skills in the interpersonal and intrapersonal domains of intelligence. According to him, teachers who are able to find ways to motivate themselves continually to maintain their will to teach should be better able to cope with the demands of teaching. The teacher's own personal development is a central part of teacher preparation. Learning to teach is construed as a process of learning to understand, develop, and use oneself effectively (Feiman-Nemser 1990, 212). Beairsto (1996, 102) also says that distinction between personal and professional life — and between personal and professional knowledge, skills and attitudes — is largely artificial. Our training and experience inevitably influence our outlook and behavior in all aspects of our life. Conversely, our personal experience shapes the personality and character which we bring to work with us.

Effectiveness and the purpose of teacher education are closely related. Effectiveness can at least be seen in teacher education results: how pre-stated aims are reached. Educational effectiveness cannot be assessed solely through quantitative results. Instead, outcomes may also be qualitative (Ruohotie 1994, 15), in which case efficacy is indicated by the quality of a learner's dedication as revealed by attributes such as autonomy and self-direction and demonstrated by the quality of consequences such as the ability to apply concepts, self-concept, motivation and self-regulating ability of the learner as critical determinants of success. In this presentation I concentrate on the qualitative aims and results of teacher education.

1.1 Teacher socialization as an individual process

Zeichner and Gore (1990, 343) deal with the term socialization in teacher development, and they emphasize a critical view of socialization that depicts the socialization process as contradictory and dialectical, as collective as well as individual, and as situated within the broader context of institutions, society, culture and history. Zeichner and Gore (1990, 332) argue that the widely accepted view is that students come to any learning situation with previously constructed ideas, knowledge and beliefs, and with certain capabilities acquired through prior experience that affect the way they interpret and make use of new information. It has also been stated that the thousands of hours that teachers have spent as students have a much more powerful effect on their socialization as teachers than their brief exposure to the teacher education curriculum (Yarger & Smith 1990, 25; Cole & Knowles 1993, 458). Zeichner and Gore (1990, 333) call this viewpoint pretraining influences on teacher socialization. According to this view, teacher socialization occurs largely through the internalization of a teaching model during the time spent as pupils in close contact with teachers, and formal teacher education is viewed as having little ability to alter the cumulative effects of this anticipatory socialization. These experiences provide them with both positive and negative role models, and they may even create in their own teaching those conditions that were missing from their own education.

Russell (1993, 148) criticizes teacher educators for assuming that beginners learn to teach by being told how to teach. This is the underlying premise in teaching activities in the university setting and in post-observation conversations during assessment of practicum performance. It is also assumed that practical experience in schools leads directly to learning how to teach. In addition, it is assumed that the introduction to teaching experience should be gradual and that all experience in schools is educative for student teachers. Overall, we take for granted that we adequately understand how people learn to teach and that this understanding is expressed in the structures of our courses. Zeichner and Gore (1990, 336–338) say that teacher education programs are not alike, and there has been very little direct study of specific courses and their impact on prospective teachers. Studies of teacher socialization have also rarely taken into account the character and quality of the institutions in which teacher education program exists.

The teacher education process is for qualification. The process is based on the theory of teacher education and the idea of the teaching profession. These theories and ideas are culture- and time-bound, and changes are connected to national and cultural development. According to constructivistic psychology, everyone constructs his/her own pattern of knowledge and skills. Because of this, every individual is different, having his/her own patterns of knowledge and skills. How to use knowledge and skills is also a personal matter. It is connected to teacher personality, energy, moral and will. That's why effectiveness is also always an individual matter. A certain amount of common knowledge is important to all students in teacher education programs, and certain skills are necessary for everybody in teaching practice. The most important of these skills is the ability to understand pupils — their developmental level, interests, thinking and learning processes

— to be able to help them learn. Teachers do it through their own personality, will, understanding and teaching skills.

2. Theoretical framework of the study

2.1 Professional identity formation of a teacher

Self-identity refers to the self as reflexively understood by the individual in terms of his or her biography (Giddens 1991, 244). Professional identity is one part of identity and is connected to experiences in that frame of reference. To be a human being is to know, virtually all of the time, in terms of some description or another, both what one is doing and when one is doing it (Giddens 1991, 35).

Self -identity is not something that is just given, as a result of the continuities of the individual's action system, but something that has to be routinely created and sustained in the reflexive activities of the individual. As Giddens further states (1991, 54), a person's identity is not to be found in behavior nor in the reactions of others, but in the capacity to keep a particular narrative going. The individual's biography must continually integrate events which occur in the external world and sort them into the ongoing "story" about the self.

In this description (Figure 1), the teacher education student is in interaction not only with him/herself, with pupils, teacher educators and supervisors but also with peers and the human environment in general during the schooling period. These are interpersonal skills, as Pintrich (1990) says. The student also learns much about him/herself from others by using self-assessment and intrapersonal skills. Professional knowledge is the database which helps him/her to interpret action and others' reactions and also steer action and give meaning to experiences. By this continuous process, the teacher education student creates his/her professional self-identity (see Giddens 1995) as a teacher. Berger and Luckmann (1966, 173) also write that identity is a key element of subjective reality and, like all subjective reality, stands in a dialectical relationship with society. Identity is formed by social process. Once crystallized, it is maintained, modified, or even reshaped by social relations. Conversely, the identities produced by the interplay of organism, individual consciousness and social structure react upon the given social structure, maintaining it, modifying it, or even reshaping it. It is a continuous dialectical process.

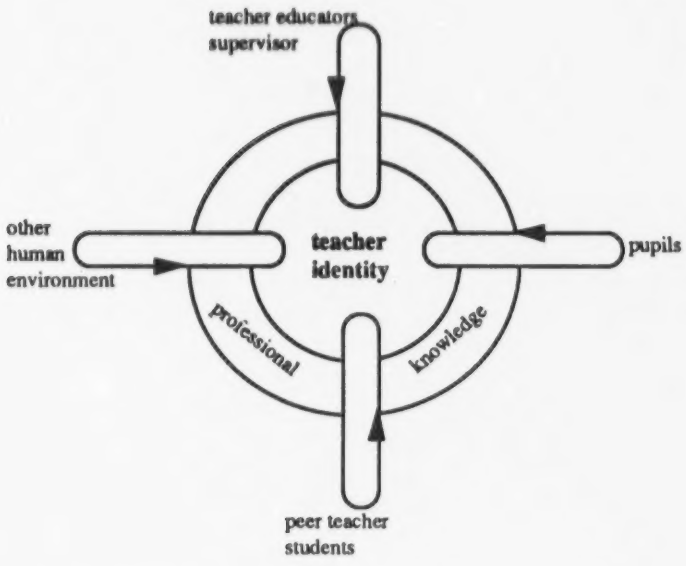

Figure 1. Key copmponents of interactive self-reflection environment during teacher education processes

According to Bullough & Knowles (1991, 39), thinking about self as teacher may enable the beginning teacher to direct his or her own professional development. On the other hand, they say, not engaging in an exploration and critique of the meanings composing the teaching self is to make certain that teacher education will remain of marginal importance in teacher development.

As Ardra Cole (1992) examines the individual and personal nature of teacher development, she stresses the role of "the other" in the growth process and in determining what each individual "knows" about his or her world. What we know about our physical environment, our social environment and ourselves is determined, either directly or indirectly, within our relationships with other people. In this study I am going to examine the individual and personal nature of teacher development and the role of "the other" in the growth process in the frame of reference of teacher education.

2.2 Teaching expertise as personal interaction with pupils

I shall select some teacher expertise studies to show that interaction abilities and self-knowing are one part of professional success and through this I shall argue why it is important to stress such contents in teacher education. According to Grimmet (1996, 302–

304), it can also be seen that the ethical view and good will are combined with teacher expertise and teacher development for authenticity in which teachers attempt to discover both their true selves as responsible professionals and the new knowledge that enables them to see possibilities in teaching that will lead to redefinition of classroom realities and roles and an enhancement of student learning.

Teachers are revealed as responsible "reflective professionals" whose theories and belief systems influence, to a large degree, their perceptions of classroom occurrences and who thus monitor their thoughts and actions involved in the teaching process. A strong positive self-image is part of the belief system that influences teachers' perception of classroom occurences and their feeling of power to have a positive effect on such occurrences. In their accounts of critical incidents in the classroom, the expert teachers revealed themselves as optimistic, outreaching, loving personalities, interested in children and concerned about their needs, able and happy to relate to them and willing to put in any amount of time and effort necessary to make a success of this. Furthermore, the expert teachers had a firm picture of what they wanted the individual learners to achieve academically and in social and personality growth, and they were convinced that it was important to give children the time needed to achieve these things, even if this meant departing from the prescribed curriculum. Expert teachers seem to attribute an integral part of their success to their ability to understand children and their willingness to observe and listen to them, making responsible interaction the keynote of their everyday work with their students (Rollett 1992, 287–288).

The driving force in the professional life of expert teachers seems to be the overwhelming conviction that, regardless of adverse factors, all children are able to learn and that it is the teachers' responsibility to enhance this growth. Their effectiveness is constantly being shaped by this force. Rollett's (1992, 288–289) study (102 elementary teachers in different countries: Austria, the United Kingdom, and the United States) reflects the interpretative synthesis model of effectiveness and responsibility, in which morality is implicitly present wherever certain humane forms of effectiveness are employed.

Experts that Berliner (1992, 246) studied had a positive motivational system at work in their classrooms as well as a recognition of individual differences among their students, a belief in their own efficacy and their student's ability to learn, and a concern with both the affective and the effective elements of the classroom environment in which they worked.

Sternberg and Horvath (1995, 10–14) describe expert performance in a variety of domains. They identify three basic ways in which experts differ from novices. The first difference pertains to domain *knowledge*. Experts bring knowledge to bear more effectively on problems within their domains of expertise than do novices. The second difference pertains to *efficiency of problem solving*. Experts do more in less time (in their domain of expertise) than do novices. The third difference pertains to *insight*. Experts are more likely to arrive at novel and appropriate solutions to problems than are novices. Experts and novices differ not only in the amount of knowledge but also in the manner in which that knowledge is organized in the memory. Experts differ from novices in terms of speed and accuracy with which generally applicable cognitive processes are executed. Experts

seem not only to perform better than novices, but they also seem to do so with less effort. The capacity to automatize well-learned routines is clearly related to the experts' capacity to be reflective and to exert effective executive control over problem solving. Filtering of relevant from irrelevant information is critical to expert performance.

In teacher education as in pedagogy in general, the active role of the student as the organizer of his/her own structure of knowledge is emphasized, and teaching is seen above all as helping the student by providing optimal learning conditions (Yrjönsuuri 1995). There is, however, little research on how expert teachers actually acquire their wealth of knowledge and use it appropriately in their classrooms (Pintrich 1990, 849). Also, a teacher's personality attributes, motives, values and emotions influence instruction and teaching (Weinert et al. 1992, 252). As I mentioned above about the individuality of teacher socialization, it should also be reasonable to talk about individual expertise.

3. Self-assessment documents in teacher education as developmental and research material

I shall take a closer look at self-assessment and self-knowing, because in teacher education it is the area which is the least known and discussed. Self-assessment also includes self-regulation and autonomy, which are in the light of present knowledge the anticipated outcomes of teacher education.

Self-assessment should be the continuing way of assessment in the life of a teacher. We should focus the teaching students' attention on the evaluation of different psychological aspects in themselves and in others. By doing so they can steer their actions better and guarantee continuous development. It should be process evaluation for future planning and managing. Teaching skills and personal features appear differently in different situations. Assessment is always assessment of possibilities. Life and career cannot be regulated beforehand. This means that we can assess possibilities, make plans and have recommendations of appropriate knowledge, manners and methods or ways of action.

Self-evaluation and self-knowing methods and documents can be of different kinds in teacher education. For instance, diaries can be used in many ways. They can be private and personal, or they can be interactive so that there are several writers or commentators. A diary helps to document things and also to reflect things and to return and memorize solutions and events and better understand and articulate developing professional knowledge. It is also important to discuss the criteria that teaching students themselves state and the criteria that the teacher education program states and how these critera are parallel. Portfolio assessment is process assessment and can steer the educational program individually. Portfolios can be collected so that professional competence can be seen in videos, tapes and other documents. What to choose for the teacher portfolio is the result of critical self-assessment. In the course of learning the portfolio can become a kind of autobiography of the student's growth (Niemi & Kohonen 1995, 54).

Cole and Knowles (1993, 467) find autobiographical writing in the period of formal learning about teaching valuable for several reasons:

1. First, and perhaps foremost, is the value of record keeping. Its value rests on the premise that individuals come to formal teacher preparation programs with an array of experiences in schools and other learning places. Such a record is useful for prospective teachers to begin to frame their present orientations and trace their developing thinking, important in forging ongoing professional development.
2. Autobiographical writing is a powerful vehicle for enhancing learning. Writing about philosophies, theories, principles, and skills related to teaching and education may help preservice teachers reveal the extent of their learning. It is also a mechanism and medium for sharing experiences with others, and learning from others through writing.
3. Autobiographical writing, if shared with others, provides a window into preservice teachers' thinking. In particular, it may help teacher educators more appropriately meet the learning needs of prospective teachers by providing insights into preservice teachers' thinking, reactions to learning contexts, responses to guidance, instruction, field placements, and the program in general.

Frigga Haug (1987, 36–39) has used so-called memory work in her research. She writes, "Writing is a transgression of boundaries, an exploration of new territory. It involves making public the events of our lives, wriggling free of the constraints of purely private and individual experiences. From the state of modest insignificance we enter a space in which we can take ourselves seriously. ... We were concerned precisely with the ways in which individuals construct their identity, the things that become subjectively significant to them." In the memory-work method, the teaching student critically examines and writes about his/her experiences, gains and losses, and successes and failures and shares them with others. It raises self-confidence to know that we are not alone in any of our various modes of experiences. And it helps to become aware of and give meaning to past experiences as a teacher, as a student, as a child etc. Self-criticism and critical thinking in general offer the possibility to grow.

Ayers (1993, 130) writes that if teachers never criticize themselves, they never have to test their deepest beliefs and values, and over time those values disappear. Soon they are acting like teachers they despised, they have become the people they once warned others about, and they have forgotten all the things that made them want to teach in the first place. Similarly, if teachers are never self-critical they will lose their capacity for renewal and growth. They will become self-justifying and dogmatic. On the other side, if teachers are too self-critical they become powerless and timid.

4. Carrying out the empirical study

In my empirical study of 64 classroom teacher students, I try to capture their developmental experiences during teacher education. All of these students, who study in the Tampere University teacher education department, have written several essays in connection with their ordinary studies about good teaching and the teacher's educational, so-

cial and ethical role. In addition to this, I have interviewed ten students in the course of their studies, always at the end of semester, twice so far. They have at the moment one year study left, and we shall do the final interview in spring 1997. I also read their practicum portfolios with autobiographical writings and try to get a picture of their learning and reflection experiences.

5. Preliminary findings: The case of J

I present some preliminary findings through the case of J, a male third-year teaching student. He has four years of earlier experience as a teacher (interview 11.5.1995, after two years of primary school teacher education).

TL Is there any such subject matter in your educational studies that has influenced you?

J I'm thinking much more of every child as a kind of wholeness. It used to be, before these studies, that we just went along that bigger mass.

Every one of them is an individual. You have kind of started to call more attention to how someone is behaving, and where does it come from, that behavior, I mean.

TL When you think about your trainee period, is there anything really impressive that comes to your mind?

J Maybe the most impressive experience was the situation where, in my opinion, there wasn't any kind of noise in the classroom. I mean, the children were enthusiastically working there. So the teacher in the back of the classroom stood up and ordered the children to be quiet there.

TL So in fact it was a negative experience?

J Yes, you can say that; it was a completely negative experience. Positive experiences, they come from the children, some kind of insights, you know; those are the best things here, when someone finds out something.

TL Do you feel that your fellow students have had some influence on you?

J I'm sure that no one has any negative impressions after these studies about this group. There are no such ideas, you know, that someone is better than another.

And by the way, it is one of those things that influences motivation a lot, you know, that one studies, that one either gets moving or not [J lives 50 kilometers away from university]. It is utterly important.

And the jokes, they are very important. You don't take things too seriously. And somehow you study life, too, and not live studying.

TL What do you expect from the studies that are left?

J I think that I'll manage somehow with this knowledge, but, of course, you know, you have this feeling of being a carrot that has germinated, but you have to grow, too ...

... earlier, you couldn't give yourself that kind of positive feedback, that you're good at something. Now it has happened. You should allow yourself that kind of thing, that you shouldn't continuously analyze yourself negatively, that there's another thing you weren't able to do.

I think I have won their [the pupils'] confidence. At least with this group I have succeeded

TL What are you thinking about all this, that there has happened clear changes in your looking at things? How does it feel?

J I feel that I could become a good teacher.

These are some excerpts from the portfolio of J's completion training. He is linguistically gifted and uses lots of metaphors aptly to express his meanings. Caring about pupils comes up often in his observations and reasoning; he feels strongly, for example, that he is working for the pupils, that he has a mission.

> The most important lesson for me has been that you have to stand on your own feet and plan everything so that you could give a reason for why you do it, and also why it is best for the pupils. Neither can you forget any one of these pupils in the class, and that's why I think there should be a period in the beginning of the practicum where one gets acquainted with the pupils seriously.

He sees teacherhood as a continuing process of developing.

> Conversations with fellow students have been interesting. Some of them think that on Thursday when you have had your final lessons, and you'll be a master of arts, you'll be a qualified teacher. Quite a dangerous picture. I think that the fact is that now we have laid a little foundation, and the rest of our lives we build the house and every now and then we make small renovations so that nothing will ever be completely ready. Maybe it would sometimes be a good thing to strengthen those foundations, too. Some day I might be qualified, too, but then I'll be watching from the side what others are doing.

Kettle & Sellars (1996, 1–24) also used the case study method to study the evolution of two student teachers' practical theories, and by so doing, tried to gain an insight into their professional development and the factors influencing this development. While practicum experiences were a major influence on the professional development of both student teachers in their study at James Cook University in Australia, the result of their study suggests that in its present form the practicum did not encourage experimentation in implementing principles which form the basis of the individual's practical theory of teaching. Both students felt that they would not be able to really put their ideas to the test until they had their own class, which indicates limits to the realism the practicum provides. They also found that the supervising teacher had a considerable influence on student teachers' development and that peer reflection groups encouraged students to challenge existing views and their own views about teaching. They also report that their study supports claims in the literature that critical reflection has the potential to positively assist student teachers in their professional development. It seems that if students are armed with critical reflection skills, they are better able to evaluate their practical and intellectual experiences and accommodate these into their growing schema of teaching and learning. In this study, the case of J confirms the same results.

6. Conclusions

Educational institutions are at least partly responsible for the transmission of beliefs, values, emotions, knowledge and behavioral habits in society. What we need in teacher education is continuous knowledge of how well education serves the needs of society and the individual. When the effects of education are analyzed, we in fact have to proceed along the lines of a certain impact chain, which starts in instruction and the immediate reactions it produces and ends in changes and other effects perceivable in the functions and environment of those being educated, which in turn are caused (at least partly) by education (Vaherva 1983).

No teacher education will be needed if it cannot cause any change in teacher students. The amount of knowledge can be measured and certain skills can be classified according to certain criteria. That is still only one part of effectiveness, because all aspects of the teacher profession come true in action only after a long period of time and may pop up in good/bad or adequate/inadequate performances of the students at school. Effectiveness can be seen as immediate and as long-term impacts. Certain experiences can be so strong that things change at once, but normally things change after studying and reflection and through reinforcing experimentation and trying. Things that prevent change can be at the individual student or system level or in those persons who carry out the teacher education project. Change can also be unexpected because of the contents and methods and the so-called hidden curriculum. Teaching students' own biased beliefs and interpretations can also lead to peculiar results.

At least the following general manifestations can be stated to the purpose of education of the prospective teacher at an individual level:

- deep, broad and flexible cognitive structure of knowledge
- interaction capacity and cooperational skills
- teaching skills
- good self-knowledge
- autonomy in decision making
- goodwill and love for students (see Grimmet 1994, 8)
- professional ethics.

Effectiveness of teacher education must be seen in these areas. Many of them are of a qualitative nature and cannot be measured in detail or with exact figures and numbers. The purpose of teacher education should be a flexible, reflective, rational professional who is capable of action steering, who is conscious of the results of his/her decisions and who should also have the will and power to continue self-development and be willing to be an active member of society and the working community.

Everyone starts teacher education with his/her own background and preconditions and acquires individual qualifications during education. All learning is not learning to perform, as Mezirow (1990, 25) says. Often it is more important to learn to understand

other people's values, ideals, feelings, moral solutions and the messages of concepts like justice, love, work, commitment and democracy. If we extend learning in teacher education to these areas, it means that we have to take affection and experiences as a part of studying and reflection in teacher education. The meanings of lifeworld are an essential part of rational and reflective educational professionalism.

How can we evaluate such things as ethical thinking, commitment or role socialization? We have no criteria to assess development in these areas, although they are very crucial domains of teacher education. If we take the humanistic values as the basis of our assessment, we have to emphasize a person's own right to evaluate his/her development and the ways to construct meanings of action. If we focus on emancipatory assessment, we concentrate on critical thinking and changing the present situation or ways of action. In both cases, it is the student him/herself who carries out the evaluation. If I refer back to expert teacher research, it can be stated with Berliner's (1992, 232) words, that for experts' own behavior the locus of control appears to be internal. They take personal responsibility for their success and failure. As a conclusion, it must be stated, however, that it is very difficult but important to study the impact of schooling on the student's personal development. From a personal point of view, the schooling has a positive impact if it promotes the many-sided development of a person and helps to create teachers who have a healthy self-esteem (National Board of Education 1995, 23). This is important because the teacher's conscious and partly unconscious behavior influences strongly the mental atmosphere of the class.

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Hannele Niemi and Kirsi Tirri (eds.)

Effectiveness of Teacher Education

New Challenges and Approaches to Evaluation

This publication provides a theoretical framework for the research project "Effectiveness of Teacher Education". The project started in autumn 1995 and is financed by the Academy of Finland.

The first part of this publication discusses different approaches to evaluation. In this part the head of the research project gives a theoretical conceptualization of the research project. The other topics of the first part include investigation of the main concepts of the research project: evaluation and effectiveness.

In the second part of this publication, new challenges to evaluation in teacher education are explored. These challenges are discussed on a cultural and societal level and on an individual level. The articles highlight new areas that need to be emphasized in teacher education, including professional morality, information technology, intercultural and international education and gender equity. On the personal level, the importance of student teachers' developmental process is discussed. The modern targets in teacher education require new approaches in evaluating their outcomes. In these articles the authors have made an effort to invent and explore alternative approaches of evaluation that would suit their research area.

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